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Fortnightly Review

Opposition Grows in Congress to CAA Reorganization Plan

Bombshell

THE lightning invasion of Denmark and Norway by Germany a few weeks ago was no more startling to the civilized world than was the President's Reorganization Plan IV to civil aviation in the United States.

In a world in which stability and tradition are being thrown to the winds, civil aviation in the United States has learned that it, too, is subject to lightning upheavals. The constructive permanence which aviation believed had been ingrained within the Civil Aeronautics Act of 1938 has proved to be but a mere hope. The marching orders are out again.

For five long years civil aviation waited while Congress carefully studied and considered aviation's knotty legislative problems. For five long years the constructive elements within aviation bided their time until the government's promotional and regulatory agency could be removed from the sorry political plight in the Department of Commerce.

There was a feeling of relief when the Civil Aeronautics Authority was created in that summer of 1938. Tension relaxed. The battle had been won. At last civil aviation had come into its own with its own agency through what was hailed then as a model piece of legislation.

But not for long. Two years to the month that Congress voted the new agency into existence the President would shift the Civil Aeronautics Authority back into the politically-ridden Department of Commerce. Two short years of respite. And now the battle lines are forming again. Congress has but 60 days to disapprove. If it

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FLORIDA DRAWS TWO FACTORIES

Monocoupe Will Locate at Orlando, Babcock at De Land; Other Mfrs. Interested in South

Two aircraft manufacturing concerns—Monocoupe Aircraft Corp. of Robertson, Mo., and the newly organized Babcock Aircraft Corp.—indicated recently that they would establish facilities in Florida, becoming the first aircraft plants in the southeast to be located south of Nashville, Tenn., new site of Aviation Manufacturing Corp.'s Stinson Div.

Commissioner G. Wayne Gray of Orlando, Fla., announced negotiations had been completed with Clare Bunch, Monocoupe president, for location of a \$150,000 factory at Orlando. The city will construct a building adjacent to the municipal airport and will lease it to Monocoupe. Bunch said the factory will employ 40 to 45 persons and will have an annual payroll of about \$60,000.

Monocoupe's former plant at Lambert-St. Louis Airport in Robertson was sold recently to McDonnell Aircraft Corp. of St. Louis.

The Babcock corporation has completed arrangements to locate a factory at De Land, Fla., and will start "immediate production," it was re-

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Succeeds Beal



Harry Woodhead,
Industrialist elected president of
Aviation Manufacturing Corp.

(Story on page 27)

FDR Would Transfer Body Back to Commerce Department Politics

THE PRESIDENT on Apr. 11 submitted his Reorganization Plan IV to Congress transferring the Civil Aeronautics Authority and the U. S. Weather Bureau to the Department of Commerce and abolishing the Air Safety Board. Stunned and bewildered by the sudden move, aviation interests were almost unanimous in condemning the transfer and a movement began almost immediately to seek Congressional opposition to the President's proposal.

Sen. Pat McCarran, (D., Nev.), aviation's staunch friend in the Senate and co-author of the Civil Aeronautics Act of 1938, was outspoken in his opposition to the proposal within a few hours after the President made public the order. On the same day Senator McCarran introduced a concurrent resolution in the Senate asking for defeat not only of Reorganization Plan IV but for Plan III issued Apr. 2 which reorganized the Civil Aeronautics Authority internally by granting the Administrator greatly increased powers.

It has been rumored in Washington for over a year that the President would ask for the transfer but in recent months these reports had been discounted.

As this issue went to press a formidable bi-partisan opposition was developing both in the Senate and in the House and observers believed there was an even or slightly better than even chance that the order would be defeated.

Plan III was an intra-agency change by which the five members of the Authority were relieved of administrative duties in favor of the Administrator. This order was reported in AMERICAN AVIATION for Apr. 15.

Plan IV is an inter-agency change affecting a number of agencies, most important being the CAA and the Weather Bureau.

Both plans become effective in 60 days from the time of their submission to Congress unless both

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Aviation Writers Ridicule 'Secrecy' Sham, Charge Political Subterfuge

The Aviation Writers Association has vigorously protested the "secrecy" regulations thrown about publication of military aviation information in Washington and has accused the administration of political motives to prevent public reaction to its plans to export late-type warplanes to the Allies, in an open letter addressed to the Army and the Navy and the Joint Aeronautical Board. President of AWA is Devon Francis, aviation editor of the Associated Press.

The open letter follows:
"You have thrown extravagant safeguards around the publication of material on new and 'secret' aircraft intended for the armed services. You have made life miserable for hard-working press agents who failed to get your nod before releasing for publication wholly innocuous photographs.

You have made it almost impossible for conscientious and patriotic magazine and newspaper reporters to do an honest job in describing what is going on in aviation.

"Lately you have received from the President of the United States an even more drastic regulation governing the release of material. The promulgation of the new rule is purely political in intent, designed to offset any unfavorable public reaction to the export of late-type warplanes originally consigned to the Army and the Navy.

"In light of all that, how do you explain the publication in the German magazine 'Flugsport,' issue of Mar. 13, of full specifications on the XPBS-1 Vought-Sikorsky military flying boat? The Navy Dept. admits the specifications were released for export negotiation in Aug., 1939. Yet American re-

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CAA Reorganization Plan

The following is that part of the President's message pertaining to the Civil Aeronautics Authority and the U. S. Weather Bureau which accompanied Reorganization Order IV:

Department of Commerce: One of the purposes of the reorganization act is to reduce the number of administrative agencies and thereby simplifying the tasks of executive management. We have made substantial progress toward this objective under previous reorganization plans. I am now proposing another step in this direction by placing the Civil Aeronautics Authority within the framework of the Department of Commerce. Reorganization Plan III, which deals with intra-Departmental changes, draws a more practical separation between the functions of the Administrator and the Civil Aeronautics Board. In Plan IV, which is concerned with inter-Departmental reorganization, I am bringing the Authority into the department structure. The Administrator will report to the Secretary of Commerce. The five-member Board, however, will perform its rule-making, adjudicative, and investigative functions independent of the Department. In the interest of efficiency it will be supplied by the Department with budgeting, accounting, procurement, and other office services. As a result of the adjustments provided in Plans III and IV, I believe the Civil Aeronautics Board will be able effectively to carry forward the important work of accident investigation heretofore performed by the Air Safety Board. In addition to the effective and coordinated discharge of accident investigation work which this transfer will facilitate, economies in administration will be possible.

The importance of the Weather Bureau's functions to the nation's commerce has also led to the decision to transfer this bureau to the Department of Commerce. The development of the aviation industry has imposed upon the Weather Bureau a major responsibility in the field of air transportation. The transfer to the Department of Commerce, as provided in this Plan, will permit better coordination of Government activities relating to aviation and to commerce generally, without in any way lessening the bureau's contribution to agriculture.

CAA Reorganization

(Continued from page 1)

Houses of Congress shall, on their own initiative, disapprove of the orders by majority votes. This majority vote is not subject to veto. If Congress should adjourn before the 60 days have elapsed, the orders carry over to the next Congress and become effective in 60 days after convening unless both Houses express majority disapproval.

The proposed transfer of the CAA back to Commerce and abolition of the Air Safety Board are the latest in a long series of legislative upheavals and uncertainties which have beset civil aviation during the past decade. After five years of effort on the part of Senator McCarran the Civil Aeronautics Authority was created by Congress in June 1938 and actually began operations in August of that year. The present move would virtually destroy all independence the CAA now has.

Sections 7 and 8 of Reorganization Order IV which pertain to the CAA and Weather Bureau are:

SECTION 7 . . . TRANSFER OF CIVIL AERONAUTICS AUTHORITY.

(2) The Civil Aeronautics Authority and its functions, the Office of the Administrator of Civil Aeronautics and its functions, and the functions of the Air Safety Board are transferred to the Department of Commerce. (b) The functions of the Air Safety Board are consolidated with the functions of the Civil Aeronautics Authority, which shall thereafter be known as the Civil Aeronautics Board and which shall, in addition to its other functions, discharge the duties heretofore vested in the Air Safety Board so as to provide for the independent investigation of aircraft accidents. The offices of the Members of the Air Safety Board are abolished.

(c) The Administrator of Civil Aeronautics, whose functions shall be administered under the direction and supervision of the Secretary of Commerce, and the Civil Aeronautics Board, which shall report to Congress and the President, through the Secretary of Commerce, shall constitute the Civil Aeronautics Authority within the Department of Commerce; provided, that the Civil Aeronautics Board shall exercise its functions of rule-making (including the prescription of rules, regulations and standards), adjudication, and investigation independently of the Secretary of Commerce; provided further, that the budgeting, accounting, personnel, procurement, and related routine management functions of the Civil Aeronautics Board shall be performed under the direction and supervision of the Secretary of Commerce through such facilities as he shall designate or establish.

SECTION 8 . . . TRANSFER OF WEATHER BUREAU.

The Weather Bureau in the Department of Agriculture and its functions are transferred to the Department of Commerce and shall be administered under the direction and supervision of the Secretary of Commerce; provided, that the Department of Agriculture may continue to make snow surveys and to conduct research concerning (2) relationships between weather and crops, (b) long-range weather forecasting and (c) relationships between weather and soil erosion.

Back of the President's proposal is believed to be a plan for a single transportation unit and the proposed shift of CAA is one step in this direction. The Bureau of the Budget, which is assigned the task of recommending governmental changes by the President, is believed to be the center of activity in advocacy of the plan.

If the order becomes effective in June, the Civil Aeronautics Authority becomes the Civil Aeronautics Board within the Department of Commerce. It will have quasi-judicial functions only. It will have no control whatever over its budgeting, accounting, personnel, procurement and related routine management functions, for these will be performed "under the direction and supervision of the Secretary of Commerce." The Administrator, completely independent of the Board, would report directly to

CALL IT A DAY

(The Following Is the Daily Column "Call It a Day" by A. H. Stackpole as it Appeared Apr. 17 in The Harrisburg (Pa.) Telegraph)

AIR SAFETY THREATENED

RIGHT on the heels of that cheer-producing ANNOUNCEMENT that domestic airlines IN these United States have just completed a YEAR of flight in which nary a passenger SUFFERED so much as a bump on the head, COMES the news from our national CAPITAL containing the greatest threat TO air safety in many years . . . and that is THE scheme of the chief executive to tear THE fine Civil Aeronautics Authority and THE Air Safety Board apart and put 'em BACK in the Department of Commerce. The C. A. A. and the Safety Board have been MANNED by experts, and not the least OF the credit for the great safety record of AMERICAN air transport lines must be PLACED at their door steps. These are INDEPENDENT, non-partisan agencies, SEPARATING the executive functions from THE judicial and legislative, and they've DONE a grand job, but under FDR's REORGANIZATION ACT, the Safety Board WOULD be abolished and the Authority WOULD be right back where it started as a BUREAU of the Department of Commerce. GENERAL JOHNSON, in his column of YESTERDAY said: "In defense of this move, ACCORDING to American Aviation Daily, IT is said that Secretary Hopkins is well

INFORMED in aeronautics and is not a POLITICIAN. If Harry is an airman, how DID he get that way? If the other reason HAD said: 'not a good politician' it could PASS." The General said further that MANY in Congress, commercial pilots, AND informed air travelers are up in ARMS against the shocking proposal and SO they should be. If the President intends TO undo by a scratch of the pen what IT has taken many years and much laborious WORK to achieve, then the blood be on HIS own head! If he's going to toss the National aviation BACK into the political merry-go-round JUST when it's beginning to get into its STRIDE after being groggy from a series OF political punches, then the blame can be PLACED at only one door, and that a WHITE HOUSE one. Aviation is a highly TECHNICAL business, and one into which AMATEUR busybodies should not attempt TO force themselves. And the record of OUR airlines has been such that any TAMPERING with the governmental CONTROL bodies under which they operate IS just asking for trouble . . . more than THAT. It's asking for tragedy, and that's what IT would get, I hope and pray that we HAVE sufficient solid citizens in the Congress TO toss this plan back on its heels, and LET the C. A. A. carry on with its grand PROGRAM. Otherwise . . . but the alternative IS too hideous to consider. A. H. S.

the Secretary of Commerce. The offices of members of the Air Safety Board would be abolished and the functions of the Safety Board would be assumed by the Civil Aeronautics Board.

The Civil Aeronautics Authority, which has enjoyed an independent status for two years, would become merely a bureau in a large government department.

Encouraging to civil aviation interests was the immediate and increasing opposition in Congress. Among Senators who announced their unqualified opposition were such Democrats as Burton Wheeler of Montana, D. Worth Clark of Idaho, Bennett Clark of Missouri and Harry S. Truman of Missouri. Republicans were expected to voice unanimous opposition with Senator Warren Austin of Vermont in the lead.

In the House the opposition was growing just as rapidly. Rep. Clarence Lea of California, co-author with Senator McCarran of the Civil Aeronautics Act, had not issued a public statement of his opposition but he is known to be definitely opposed to the order. Reps. Clifford Woodrum of Virginia, S. Jennings Randolph of West Virginia and Harry Shepherd of California, also Democrats, were loud in their opposition, while the Republicans were lining up a 100% bloc to oppose the order. Reps. Melvin Maas of Minnesota, himself a

flier, and Fred Bradley of Michigan, a private pilot, were actively stirring up opposition strength.

Meanwhile the Air Line Pilots Association, headed by David L. Behncke, president, was the first aeronautical unit to launch an open campaign to defeat the order, especially with regard to the Air Safety Board. The ALPA was largely responsible for creation of the Board. Behncke sent lengthy telegrams and letters to every member of Congress and was staging an effective opposition battle.

The National Aeronautic Association sent 150 telegrams to chapters, regional vice-presidents and others of its officials, asking for expressions of approval or disapproval to the President's order. The vast majority of replies expressed open and unqualified opposition to the proposed change.

The battle in Congress was expected to start the week of Apr. 28, although hardly a day passed without reference to the order on the floor of the House. Chairman of the Senate committee on reorganization is Sen. James Byrnes of South Carolina, who was the only Senator up to press time to endorse the President's order.

Comdr. Radford to U.S.S. Yorktown
Comdr. Arthur W. Radford, commander of the Seattle, Wash., Naval Air Station, has been ordered to duty as executive officer of the U.S.S. Yorktown aircraft carrier.

3-Day National Aviation Forum to Have Largest Aircraft Exhibit

May 27-29 to Mark National Capital's Biggest Aviation Gathering; President Extends Cooperation; Tom Beck Handling Arrangements

One of the largest and most comprehensive exhibitions of airplanes, airplane engines and accessories ever gathered together in one place will feature the National Aviation Forum to be held in Washington, D. C., May 27-29. Plans are moving forward rapidly to make the three days the greatest aviation demonstration ever sponsored and the event has already been assured of active government cooperation from the President on down to all of the agencies concerned with aviation.

The forum is being sponsored by the National Aeronautic Association with Thomas H. Beck, president of Crowell-Collier Publishing Company, as general chairman. On the committee assisting Mr. Beck are Col. Edgar A. Gorrell, president of the Air Transport Association; Col. John H. Jouett, president of the Aeronautical Chamber of Commerce; Brig. Gen. Walter G. Kilner, U. S. Air Corps, retired, vice-president of the National Aeronautic Association, and A. Felix du Pont, Jr., of Wilmington, Del.

All forum sessions will be held in the auditorium of the Commerce Department, while luncheons and a large banquet will be held at the Willard Hotel, present headquarters of the NAA. All leading hotels will have aviation exhibits in their lobbies and there will be various exhibits elsewhere including an exhibit of light airplanes on some centrally-located government park property near the downtown area.

Major exhibit will be at the Army's new Bolling Field in the two large hangars. It is being managed by Capt. C. S. "Bill" Irvine, popular Air Corps officer who supervised the elaborate military aircraft exhibit in January at Bolling Field for members of Congress and government officials which received exceptional praise. Capt. Irvine has been assigned to the May exhibit by the War Department.

The January exhibit at Bolling Field was primarily an exhibition by the Air Corps, and contractors to the Air Corps, of military training and tactical airplanes with emphasis placed on armament and the potential offensive and defensive power of the U. S. aerial forces in defense of the nation.

The May exhibit will be primarily an exhibition of civil aviation, including airplanes of all commercial types from the smallest training ship to the largest commercial transport, as well as all available types of export airplanes both commercial and military. It will include the accessory and auxiliary equipment utilized on all the foregoing types and also the exhibition of both commercial and governmental aids to aviation.

"The basic objective of the exhibition and the forum will be to focus attention of the people in the entire Western Hemisphere on aviation, its possibilities and its problems," Capt. Irvine said. "The spotlight of public attention and consideration will be focused on light airplanes and their equipment, airline and other large commercial airplanes and the equipment they utilize on export planes which are contributing so largely to our transport operations in other countries, as well as the augmentation of their aerial forces.

"An aeronautical exhibition of this character has a real purpose and a real value, not only to the aviation industry, but to the people of the

United States. Its purpose is to arouse the interest of our citizens in both civil and military aviation, their possibilities, their equipment and their problems. Its value lies in the fact that when we arouse the interest of our citizenry and obtain their cooperation, we inevitably insure the formation of a strong aviation industry and a large group of trained civilian pilots, both of whom will stand behind, and supplement our military forces in the case of threat of aggression."

Hourly bus service direct to Bolling Field for convenience of forum delegates and the general public, will be provided.

Gill Robb Wilson, president of the NAA, is general chairman of the forum. Representing the U. S. Senate on the committee are Senators Pat McCarran of Nevada and D. Worth Clark of Idaho. For the House of Representatives, Congressman Dow Harter of Ohio is the representative. Other committee chairmen are:

U. S. Chamber of Commerce, Colonel Barber and Vern Sullivan; District of Columbia, D. Walter Swan, United Air Lines; Publicity, Frank Getty, Arthur Kudner, Inc.; Promotion, Don Duff, Pennsylvania-Central Airlines; Exhibits, Capt. C. S. Irvine; Government exhibits, Paul Frizzell, secretary, CAA; Program, Thomas H. Beck; Registration, Russell Schneider, director, Greater National Capital Committee; Hotels, Frank Swadley, manager, Carlton Hotel; Transportation, D. Walter Swan, United Air Lines; Luncheons and dinners, Capt. Corley P. McDarment, and Mary Benson, pres. and v. p., Washington Aero Club; Education, Dr. R. W. Hambrook, U. S. Office of Education; NACA, Dr. George Lewis, director, and John Victory, secretary, NACA; Private Flyers, Richard Fell, Gulf Oil Company; Commercial non-scheduled flying, Thomas G. Early, CAA; Airlines, Bill Briggs, Eastern Air Lines; Ninety-Nines, Lu Lu Shank, president, Washington section; NAA, William P. Redding, secretary, NAA.

Among the government agencies to have exhibits are: Civil Aeronautics Authority, Coast Guard, Post Office, Weather Bureau, National Advisory Committee for Aeronautics, Works Progress Administration, Office of Education, Coast & Geodetic Survey, Navy Bureau of Aeronautics, Army Air Corps.

Efforts are being made to have the annual convention of the Aviation Writers Association in Washington concurrently with the forum and exhibition to give the aviation editors an opportunity to see the displays and participate in the program.

Institute Schedules Summer Sessions at Seattle, Pasadena

Summer meetings at Seattle, Wash., and Pasadena, Cal., on June 21 and June 24-26, respectively, have been scheduled by the Institute of the Aeronautical Sciences.

At Seattle, the I.Ae.S. will hold a session on "Air Transport and High Altitude Problems" at the summer meeting of the American Association for the Advancement of Science. The Musick Memorial Trophy will be presented to Robert J. Minshall at the meeting. The Institute's second annual summer meeting at Pasadena will comprise three days of technical sessions on aerodynamics, flight testing, meteorology, vibration and flutter, and physiology.

Aviation's Friend



Sen. D. Worth Clark, Idaho Democrat, staunch aviation friend in the upper House, who has introduced a bill comprising the Bennett pilot training plan and who will fight the President's proposed transfer of the CAA to the Commerce Department. He flies frequently.

SPA Meeting

The Sportsman Pilots Association will hold its annual membership meeting May 18-19 at the Hotel Greenbrier, White Sulphur Springs, W. Va. Plans for the summer cruise will be made at that time.

Ames Laboratory

The new laboratory of the National Advisory Committee for Aeronautics at Moffett Field, Sunnyvale, Cal., will be named the "Ames Aeronautical Laboratory" in honor of Dr. Joseph S. Ames, committee chairman for 20 years, Dr. Vannevar Bush, present chairman, announced Apr. 18. Dr. Ames retired in Oct. 1939. A special committee called on him at his home in Baltimore to notify him of the honor.

NACA Celebrates 25th Anniversary April 18

The National Advisory Committee for Aeronautics commemorated its 25th anniversary Apr. 18 with a reunion luncheon of present and former members at the Army and Navy Club in Washington. Following the regular business meeting of the committee in the morning, members called at the White House for a reception by the President at noon.

The NACA is the government's agency for scientific research in aeronautics, coordinating the research needs of aviation so as to prevent unnecessary overlapping and duplication of effort and stimulating research in scientific and educational institutions. The principal laboratories are at Langley Field, Va., and a second major research station is now under construction at Sunnyvale, Cal.

Aviation Projects Subject of Wisconsin Parley, May 18

Possibility of stimulating employment and purchasing power with a series of summer aviation projects will be discussed by community and aviation leaders at a state conference in Wausau, Wis., May 18. The parley will be sponsored by the Wisconsin department of the NAA, of which Archie C. Towle, Wausau airport manager, is president.

Among the speakers listed by Towle is Harold Cray, United Air Lines vice-president, who will discuss feeder lines and also the problem of maintaining production in aircraft factories after the end of the present European war.

Reading Plans Air Shows

A demonstration of local aircraft by pilots and students on May 5 and a display of 40 to 50 private and commercial planes early in June have been planned by the Reading (Pa.) Aviation Association. Both affairs will be held at the Municipal Airport. The June exhibit, according to J. Turner Moore Jr., president of the association, is to be one event in a summer program to spread aviation information to the general public.

Calendar

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| May 1-3—American Society of Mechanical Engineers, Spring Meeting, Worcester, Mass. | June 21—I. Ae. S. Session on "Air Transport and High Altitude Problems" at Summer Meeting of AAAS, Presentation of Musick Memorial Trophy, Seattle, Wash. |
| May 3-4—Oklahoma Air Tour, Beginning at Oklahoma City. | June 24-26—2d Annual Summer Meeting of the I. Ae. S., Pasadena, Cal. |
| May 5—Thunderbird Aviation Club's Annual Air Show, Ponca City, Okla. | June 25—National Inter-Collegiate Air Meet, Long Island Aviation Country Club, Hicksville, N. Y. |
| May 5—Demonstration of Aircraft, Municipal Airport, Reading, Pa. | July 4-6—Air Show, Denver, Colo. |
| May 11-12—2d Annual Aircraft Exhibit of the Aero Club of Kentucky, Bowman Field, Louisville, Ky. | July 7-3d Annual Air Races and Air Classic, Kalamazoo, Mich. |
| May 13-18—Celebration of Aviation Week & Dedication of Airport, Savannah, Ga. | July 7-9—1st National Air Congress and NAA Convention, Brown Palace Hotel, Denver, Colo. |
| May 18—Wisconsin Aviation Conference, Sponsored by NAA, Wausau, Wis. | July 14—All-Dixie Air Show, Lovell Field, Chattanooga, Tenn. |
| May 18—Pacific Coast Inter-Collegiate Air Meet, Gardena (Cal.) Valley Airport. | July 21—5th Annual Air Show, Ft. Wayne, Ind. |
| May 18-19—Sportsman Pilots Association Meeting, White Sulphur Springs, W. Va. | Aug. 11-17—4th Annual Wisconsin NAA Air Tour. |
| May 27-28—NAA's National Aviation Forum, Washington, D. C. | Aug. 18-19—Air Show Sponsored by Sheldon Chapter of NAA, Roscoe Turner Field, Sheldon, Ia. |
| June 1-2—Birmingham Air Carnival, Birmingham, Ala. | Sept. 3-6—American Society of Mechanical Engineers, Fall Meeting, Spokane, Wash. |
| June 9-7th Annual Air Classic Sponsored by the Junior Chamber of Commerce, Port Columbus, Columbus, O. | October—Air Line Pilots Association, Annual Convention, Chicago, Ill. |
| June 9-14—SAE's Summer Meeting, The Greenbrier, White Sulphur Springs, W. Va. | Oct. 7—Air Line Mechanics Association, Annual Convention, Chicago, Ill. |
| June 9-23-3d Annual Southwestern Soaring Contest, Wichita Falls, Tex. | Oct. 7-11—National Safety Congress and Exposition, Stevens Hotel, Chicago, Ill. |
| June 15—Opening of Philadelphia Municipal Airport. | Jan. 1941—NASAO's Annual Convention, Louisville, Ky. |
| June 17-21—American Society of Me- | |

2,141 Military Planes Produced in '39; Will Reach 9,600-a-Year Rate in Sept.

Production of military and heavy commercial aircraft in the United States was at the rate of 4,200 a year in January, 1940, but will be at the rate of 9,600 a year by September, according to Brig. Gen. H. H. Arnold, Chief of the Army Air Corps, in testimony before the House Appropriations Committee on March 7 and just made public.

Production of aircraft engines by two major engine manufacturers (Pratt & Whitney and Wright Aeronautical) has increased to 800 a month in January, General Arnold said, and was increasing at a sufficient pace to keep up with increased airplane production.

In January there were 351 military and heavy commercial planes produced, an increase over the figure of 157 for January, 1939, but these figures will be greatly increased by the end of the summer, he indicated. Although no definition of the heavy commercial types was available, it excluded all planes of the private flying class but included commercial airline transports and similar ships being produced by the larger manufacturers.

General Arnold submitted the following table of aircraft production:

	Military	Commercial	Total
1939			
January	143	14	157
February	163	23	186
March	180	26	206
April	152	28	180
May	180	32	212
June	211	13	224
July	247	18	265
August	256	22	278
September	117	10	127
October	51	19	70
November	104	15	119
December	337	43	380
Total	2,141	263	2,404
1940			
January	320	31	351

Adding the 2,141 military planes produced in 1939 to the 3,715 commercial planes of all types produced, the grand 1939 aircraft production of the U. S. amounted to 5,856 airplanes. Of the 3,715 commercial planes, however, the bulk were in the light plane class. These production figures include airplanes for export.

In contrast to an over-all airplane production of 5,856 airplanes in 1939, the 1940 production figures should be well over 10,000 with a possibility that this figure may be as much as 12,000. Military production alone should be over 7,000 planes, depending upon future orders from abroad.

Seversky Seeks Plant Site

Maj. Alexander P. de Seversky has been negotiating with Long Beach, Cal., officials for a site and a \$250,000 plant, it was reported in mid-April from Los Angeles.

Air Reserve Backs 2 Bills in Congress

The Air Reserve Association is supporting two bills in the current session of Congress, according to the association's recent news letter edited by Capt. Corley P. McDermont, Air Corps, retired.

One bill introduced in the House by Rep. John W. McCormack of Massachusetts (HR-8752) and in the Senate by Senator Morris Sheppard (S-3566), calls for compensation for Air Reserve officers on inactive duty equal to 25% of monthly base pay (payable quarterly) when such officers participate in aerial flights to the extent required by regulations for flight pay in the Regular Army; authorization for extended active duty for Reserve Officers between grades of Captain and Colonel provided such service is deemed expedient by the Chief of the Air Corps; authorization for Chief of Air Corps to designate at least two officers of field grade for detail in his office to help with training programs or directives; authorization for all Air Reserve officers meeting physical standards for flying to get government insurance up to \$10,000 without further physical examination.

Extension of death and disability compensation for Reserve officers who were injured, and the dependents of such officers who were killed prior to July 15, 1939, has been asked in S-3131 introduced by Senator Lister Hill and HR-8449, introduced by Rep. John J. Sparkman of Alabama. Hearings have been requested on both bills.

Air Corps Makes 1st 'All-Blind' Flight

What is believed to be the first all-blind instrument flight between two distant points took place Apr. 6 when Maj. Carl B. McDaniel, Army Air Corps, flew a Boeing Flying Fortress from Mitchel Field, Long Island, to Langley Field, Va., a distance of 300 miles, in two hours and two minutes.

While it was not the first blind flight, most such experiments have started and ended at the same airport. The Apr. 6 flight was the first made in a plane the size of the 22½-ton four-engined bomber and was carried out over a regular course entirely by instruments. The pilot could not see out from his cockpit from the time he opened the throttles at Mitchel Field until the plane rolled to a stop at Langley.

The trip was hailed by the Air Corps as an historic flight and a demonstration of what can be done in bad weather. Maj. McDaniel who has been flying for 21 years, was assisted by Capt. W. A. Matheny and Lt. W. P. Ragsdale and four enlisted men. Two civilians were aboard, Ray Platnick, of Hempstead, L. I., and Devon Francis, aviation editor of the Associated Press.

The plane cruised about over Langley for 30 minutes before landing. Army officials said this was the first time that an instrument landing had been made at the end of a long flight.

Tests Resumed

Stratford, Conn.—Tests of the new experimental mid-wing monoplane, XS02U-1, known as the "praying mantis," have been resumed at the Vought-Sikorsky Aircraft Div. of United Aircraft Corp. here. The two-place ship has been designed for catapulting from cruisers and is convertible for either sea or shore landings.

Vultee Delivers a Basic Trainer

Army Air Corps Photo



A new basic training plane, designated as the BT-13, recently was delivered to the Army Air Corps' materiel division at Wright Field, Dayton, O., by Vultee Aircraft Inc., Downey, Cal. The plane is a single-engine two-place monoplane with an approximate wing span of 42 ft. It is powered by a 450-hp. single radial nine-cylinder Pratt & Whitney engine. Propeller is two-bladed and has a diameter of nine feet.

The BT-13 has a full cantilever stressed-skin metal covered wing fabricated from aluminum alloy sheet.

Fuselage is of welded steel tubing to the rear cockpit and the remainder is of full monocoque stressed-skin construction. Quick detachable metal panels are incorporated from the fire wall to the rear cockpit. Landing gear is of the full cantilever fixed type employing oleo struts; equipment includes hydraulic brakes. Two-way radio is installed and also instrument flying equipment.

Approximate gross weight of the plane with normal load is 4,173 lbs. Fuselage length is 28 ft., 7 in.; height, 12 ft.; chord, 7.75 ft. at root of wing.

Three British Heavy Bombers



When the British bombed the German air base at Sylt some weeks back it was the Armstrong-Whitworth Whitley bomber, of which three are shown above, which was chosen for the air attack. This bomber has a span of 84 feet, wing area of 1137 sq. ft., gross weight of 25,900 lbs., and a cruising speed rated at 245 mph. at 16,000 feet. It

is said to be able to climb to 15,000 feet in 16 minutes and has a service ceiling of 25,000 feet. It is powered with two Rolls-Royce Merlin liquid-cooled engines of 1980 rated hp. Disposable load is given as 8,380 lbs. (International News Photo).

BRITISH DEPLORE LOSS OF MARKETS

Magazines Blame Government for Permitting American Industry to Capture Dominion Outlets

The order by South African Airways of 16 Lockheed Lodestars was "so severe that it may be described as the loss of the South African market" by England in favor of American aircraft, the British aeronautical weekly, *Flight*, said editorially in its Mar. 28 issue.

"Events there (in South Africa) are going the same way as they did in Australia," the editorial said. "Before the ban on American aircraft was lifted and the first Douglas DC-3 was imported in May, 1936, de Havilland 86's and Rapides were in use on the airlines of Australia. But thereafter, Australian operators, except for a negligible number of Rapides, bought only American all-metal transports, Douglas and Lockheed. They could not buy British because there was no comparable type."

"Canada, too, when it went seriously into the airline business, equipped its new Trans-Canada Airlines with 15 Lockheed 14's, and in New Zealand, though numerically few, Lockheeds make up a large proportion of the small transport fleet there. Now, with the total cessation of export since the war, we have clinched the Lockheed grip on our own markets, and the loss of South Africa swells the total to four—the transport aircraft markets of all the British Dominions are now lost to the British aircraft manufacturing industry."

"One may, perhaps, be justified in asking if all is well commercially with the Empire when it cannot—no, will not—supply the needs of its own Dominions. None of these markets will be regained before the aircraft bought have worn out or otherwise reached the end of their lives. They will not be regained without strenuous effort, for airline operators do not like changing over to a new design. For operating and maintenance reasons it is easier to go on with the same type, and if that type is satisfactory, an intruder has no chance. British airlines are now no more than intruders on the airlines of the British Dominions, and the result of the contest, Lockheed vs. England, can be announced."

Another British weekly, *The Aeroplane*, in its Mar. 29 issue, criticized the government for allowing commercial aircraft production to languish. It pointed out that the de Havilland "Flamingo" is the only "hope for years to come" as far as suitable transport equipment is concerned and said that only eight of these are now being built for British Overseas Airways. "Unless we can give some attention to the civil market now, there will be no hope of recovering any part of it from the Americans for years after the war," the magazine said.

Babb Air Freighter Designs About Ready

Engineering sketches for his projected 30,000-45,000 lb. freight plane are "about finished" according to Charles Babb, international used aircraft broker of Glendale, Cal., with announcement on production plans to be forthcoming soon.

Babb would not say whether he planned to build the plane independently or to farm out a contract to an already established plant. He would admit only that the huge, twin-engine, high-wing ship will be able to utilize half its gross weight as "useful load." It will be an all-metal craft. Further details, Babb said, are unavailable because "many features are covered only by patents applied for."



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Another Milestone

It is difficult to realize that the air transportation industry has grown from nothing to its present proportions in such a brief space of time. On April 17th just past, the nation's oldest existing airline, Western Air Express, celebrated another birthday and there were only fourteen candles on the cake.

There was very little in Western Air's original takeoff on April 17, 1926 that would have suggested the perfection of today's air transport system. The open cockpit Douglas M-2 biplane, powered by a wartime Liberty motor, required seven and one-half hours for the trip to Salt Lake City. Passengers, when there were any, climbed into a heavy flying suit and perched precariously on the mailsacks, fully exposed to the weather.

Forced landings on account of weather were frequent. In fact, Western Air's famous original pilot quartette, Jimmie James, Fred Kelly I, Al De Garmo and Maury Graham were all provided with keys to the telephone boxes along the Union Pacific tracks so they could land nearby and phone ahead when the weather looked doubtful.

From these humble beginnings the Boarder to Boarder System of Western Air Express has kept pace with the industry's growth and is proud to have contributed many of the developments that make modern air travel dependable, convenient and safe. Western Air Express is:

FIRST to complete 14 years of continuous operation

FIRST to carry regular passengers on air mail flights

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FIRST to install air mass analysis system of weather forecasts

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FIRST to establish half-fare for children

FIRST to provide "Fly-Ur-Car" service

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FIRST to have 50% of its Flight Captains in "Million Mile" Class earned on its own system

HOWES TO RESIGN FROM P.O. JUNE 15

Official Has Had Charge of Air Mail Since Aug. 1938; Future Plans of Air Unit Undecided

First Assistant Postmaster General W. W. Howes, who has had supervision of the air mail since Aug. 1938, submitted his resignation to President Roosevelt Apr. 15, to become effective June 15. General Howes indicated that he would re-enter active politics at that time, he being a member of the Democratic National Committee and high in party circles.

General Howes told Mr. Roosevelt that no president "has a more outstanding record of achievements in behalf of humanity in general and the citizens of our country in particular." The President praised the General's record of seven years in the administration.

It had been reported for some months that General Howes would step out of the Post Office Dept. this year. The air mail division of the department was transferred to him in 1938 when the Civil Aeronautics Authority was created, the air mail having been under Second Assistant Postmaster General Harilee Branch until that time. Early in the New Deal he had had supervision over air mail.

Whether air mail will be transferred back to the Second Assistant's office, now occupied by Ambrose O'Connell, or whether it will remain with the First Assistant, has not been determined. General Howes will retain hold of air mail until June 15.

Wash. Airport Will Handle 8,000 Cars, 50,000 Spectators

Washington National Airport to be opened at Gravelly Point later this year "should come pretty close to paying its way right from the start," Col. W. Sumpter Smith, in charge of construction of the airport, told the Arlington, Va., Chamber of Commerce recently.

"Both in Europe and in the United States there is plenty of data to show that the visitor to the airport can be made painlessly to pay much of the cost of handling the passengers and the goods that go through it," he said. Concessions will bring good prices, he said, and parking space will be provided for nearly 8,000 cars and observation space for upwards of 50,000 people with dining and refreshment space commensurate with their prospective needs.

Washington Airport is being built to measure up to the railroad depot of the past which was the popular gathering and dining spot of the town, he said.

Messerschmitts



The above photo is captioned "somewhere in Germany" and is said to have been taken recently. It shows the assembly line of Messerschmitt fuselages being rushed through to fill Germany's needs for fast pursuits. Only a few workmen are in evidence, however.

Freight Rates Not to Be Increased, Chamber Told

The attempt by railroads to reclassify freight shipments of airplanes and airplane parts has been abandoned, the Aeronautical Chamber of Commerce was informed following hearings held in New York and Chicago at which aircraft manufacturing and air transport interests protested vigorously against the proposals. The reclassification would have materially increased shipping rates on most aircraft shipments and in the case of certain parts the rates would have been trebled.

Al Williams Calls Plane Sales to Allies a 'Sell-Out' and 'Betrayal'

The policy of the administration in permitting the Allies to buy America's most advanced types of military and naval planes "is one hundred per cent wrong," Maj. Al Williams, aviation editor for the Scripps-Howard newspapers and syndicate, said in one of a series of newspaper articles condemning the sales to foreign nations as "one of the most devastating sell-outs in our history." Maj. Williams is manager of the aviation department of Gulf Oil Co.

"This policy is not designated for America's interests first, and neither can it be substantiated on any such claim," he said. "Saying that it is a tooling-up program is a quick excuse for the policy."

In another article, he said: "From the British and French deficiency in

North Central States Organize to Develop Middle West Aviation

Formation of a permanent organization to help develop private and commercial aviation in the north central states culminated in the North Central Regional Aviation Planning Conference in Omaha, Neb., Mar. 22-23. Named chairman of the seven-state planning committee to coordinate activities of airport and aviation interests in the region is Rudy C. Mueller, president of the Nebraska Aeronautics Association.

Purpose of the new organization, the North-Central Division of the Air Congress of America, as described by Mueller, is to plan the location of airports, schools and factories, and to "gain for the Middle West some of the great aviation industry and business bulk of which now goes to states on the two coasts."

The committee will meet May 11 at Sioux Falls, S. D. to plan for the organization's first annual meeting next fall. Appointed to the committee were Matt J. Ryan, Marshall, Minn.; A. E. Thomas, Des Moines, Ia.; Ben C. Larkin, Bismarck, N. D.; S. R. Halley, Rapid City, S. D.; Archie C. Towle, Wausau, Wis.; Wilfred O'Leary, Cheyenne, Wyo., and Ray H. Beebe, Hastings, Neb. Representatives from Colorado, Kansas and Missouri were among the 130 persons attending the conference but they did not join in formation of the new group.

Patent Celebration

The aviation industry played a prominent part in the 150th anniversary celebration of the U. S. Patent System, Apr. 8-14. Glenn L. Martin Co. was one of the largest exhibitors in the display at the Dept. of Commerce building, Washington. Orville Wright, Igor Sikorsky, Dr. Vannevar Bush, Edward J. Noble and Arthur Nutt were members of the U. S. Patent Law Committee.

The Improved Bell Pusher Fighter



The War Department announced in March that the service-test airplane YFM-1 has been delivered to Wright Field by Bell Aircraft Corporation. The ship is an improvement over the first multiplace fighter known as the XFM-1 delivered in 1937. The nose has been slightly extended and flush windows replace the blisters of the original ship. The general contour is cleaner. Pusher propellers continue to be a unique feature. These are three-bladed type and measure 11½ feet in diameter. Approximate gross weight is 17,500 pounds with five in the crew. The power is supplied by Allison V-1710 type engines.

airpower, which leaves both nations trying ineffectively to take the offensive from German airpower, we should now learn an inexpensive lesson of vital importance. . . . We, in this country, never have had air strength enough to rate the name of airpower.

And now, the French and British have been given a free hand in taking not only our latest existing types of warplanes, in which our military pilots have had no chance to fly, but the next and the next after that of improved models that are not yet beyond the experimental stage."

Pointing out that Congress authorized an increase in the Army Air Corps strength so that we could have 5,300 planes by July 1, 1941, Maj. Williams said it is now impossible to reach that figure with the Allies getting our best equipment and assuming the orders originally ordered for the Air Corps. "It has always been 'next year' with the United States. It was that way in the last war, and we had plenty of mass production but not the mass production of American weapons. And so we reported for duty without American guns, airplanes or motors."

"Where, among the blueprints of newer and unbuilt warplanes, do we plan to stop and buy enough to train thousands of fighting pilots—and when? In all the excuses for the Administration's sale of American airpower, no one has yet given us a date when we will have a definite number of planes ready to take the air to defend the United States."

"As long as we continue to help the foreigners make up for their mistakes, with our latest secret warplanes, we will be unprepared in the air. . . . Airpower without airplanes just doesn't make sense."

"This whole set-up is a betrayal of America's defense in the air."

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13-Yr. Public Aid to Air Transport Totals \$120,431,000, Eastman Reports

Public aids to scheduled air transportation totaled \$120,431,000 during the period 1926-1938, according to a four-volume report on "Public Aids to Transportation," released Apr. 15 by Joseph B. Eastman, chairman of the Interstate Commerce Commission.

If "air mail use of airways" is not charged against the airlines, the total is reduced to \$110,863,000, the report said. In addition to this total, aids to non-scheduled uses of airways and airports, other than government uses, aggregated \$56,500,000 in the same period.

The aviation section of the Eastman report was prepared mainly by Douglas L. Cullison, former member of the staff of the Coordinator's section of research. Cullison was also in charge of preparing the CAA's airport report to Congress before the job was turned over to Edward P. Warner.

"Public aid" is defined for the purpose of the report "as any grant, whether direct or indirect and specific or general, in money, credit or in kind, or of the use of facilities or services, or any remission of moneys due, made by a government, or by a group acting for the collective good, for ends deemed productive of public benefit, without direct recompense therefor." Eastman stated that the term "subsidy" would not be adequate unless given a much broader meaning than it commonly conveys.

The \$120,431,000 does not include any aid which may have been conferred through the mail contracts of the 1926-30 period. The total is divided as follows: excess of air mail payments over assigned costs, 1931-38, \$64,654,000; federal airways and related services 1926-38, \$33,672,000; airports, 1926-38, \$22,105,000. If air mail use of airways, totaling \$9,568,000 is not charged, the \$33,672,000 becomes \$24,104,000.

When the air transport industry becomes more firmly established, efforts should be made to require it to pay its way, the report stated. However, instead of criticizing the aids, it was pointed out that "the various units of government have contributed to the development of a commercial air service and an airway system generally superior in equipment, personnel and operating methods to any found in other countries."

Aid through the air mail contracts is declining and it is to be expected, as time goes on, that it will be re-

moved so far as all except certain light traffic lines are concerned, according to the report, which added that aids through public provision of airports and airways doubtless will increase. The users should bear a fair portion of the costs of the facilities and services so provided, and non-scheduled flying should be looked to for greater payments, it said.

"While in view of recent trends, it is possible that the present public aid can be reduced and eliminated in the case of the major lines, it appears that the time is considerably distant when the passenger business will yield revenue enough to enable the carriers to provide all of their own airway facilities or airports or pay their full share of the costs incurred in these ways by public bodies," the study commented. It was also stated that "air transportation is so new that a critical appraisal of government expenditures in its behalf must await further knowledge of its potentialities."

Scheduled and non-scheduled for-hire air transport operations "have not reached the point in size which would make them a serious 'problem,'" according to the report. "Still a young form of transportation but one bent on growth, its economic strength has not been fully tested. Projects which call for large additions to the aids heretofore given require careful appraisal. As previously noted, conditions are now better than they have been for the industry to demonstrate what it can do. Its future progress will be followed with interest."

Another portion of the report stated: "The railroads would gain, though not to an important extent, if the public aids conferred on air transportation were removed. They have not specifically urged that such a step be taken." A policy of requiring the industry to pay its way when it becomes more firmly established "could well be adopted now for the guidance of the industry during the next decade or so. In some instances, it may be advantageous for the carriers to provide their own facilities to a greater extent than they do at present, though it is understood that, for technological reasons, this step could be taken to only a relatively limited extent."

Concerning the CAA airport report to Congress, upon which Cullison worked, the Eastman study stated: "All in all, the report may be said to have brought together a large amount

Floats for the Navy



Photo shows one of the Navy's latest scout bomber seaplanes, the Vought Sikorsky SB2U-3 fitted with Edo standard float gear.

of useful material, to have presented a plan which admittedly was only partially developed in its technical and cost aspects, and to have given insufficient weight to costs and the related question of the ability of users and communities to bear their appropriate shares of these costs."

Explaining the basis on which the public aids were derived, it was stated that "for the purpose of this report it is necessary and proper to assume that the public aid enjoyed by the air transport industry in the period since 1930 is to be measured by whatever excess there may have been in what the government paid for the transportation of the mail over what it cost to render the service required by the government. Cost includes, of course, a reasonable return on investment and reasonable compensation for efficient management."

Ryan Urges Dismissal of Lample Proceeding

Recommendation that the CAA dismiss proceeding instituted against Chris M. Lample, assistant chief of CAA airways engineering division, for alleged violations of Civil Air Regulations was made in an advisory report issued Apr. 16 by Oswald Ryan, authority member who served as examiner at the hearings held Feb. 29, Mar. 1 and 11. Lample had crashed in a CAA plane near Baltimore, Md., Sept. 5, 1939, the Air Safety Board describing the probable cause as "loss of power from maneuvering the airplane at extremely low altitude."

"The preponderance of the evidence," Ryan found, "supports the conclusion that respondent was flying at a low altitude . . . in an effort to effect a landing in an emergency which had been created by engine trouble."

Governmental Coordination Opposed By Air, Rail, Highway and Water Carriers

Government intervention in behalf of any type of carrier is not favored by airlines, railroads, truck lines or waterway users, according to the consensus of opinion expressed Apr. 15 at Lincoln, Neb., during the second annual transportation conference sponsored by the University of Nebraska.

A predetermined plan of growth and regimentation for transportation is not in the public interest, was the opinion of water, rail and highway carriers. The speaker for air transportation was Cyril C. Thompson, executive assistant to the president of United Air Lines, who told of regulation first under the air mail contracts and later under the Civil Aeronautics Authority.

Among the speakers were Joseph B. Eastman, chairman of the Interstate Commerce Commission; L. C. Allman, vice-president of the Fruehauf Trailer

Co.; John V. Lawrence, general manager of the American Trucking Association; C. E. Childe, Missouri River Waterway Association; Robert Henry, assistant to the president, Association of American Railroads; E. L. Taylor, commissioner of the Public Service Commission of Connecticut; D. L. Kelly, Public Service Commission of South Dakota; and W. F. Mulady, vice-president, American Trucking Association.

Aviation Writers

(Continued from page 1)

porters have been trying unsuccessfully to obtain them for months.

"How do you explain the publication in the British magazine 'Flight' of a drawing of the cannon installation in the 'Airacobra,' one of the hush-hush American military secrets?"

"How do you explain why railbirds around almost any aircraft factory flying field can snap pictures of new stuff at will, and why anybody who publishes such pictures is subject to a year's imprisonment and a heavy fine?"

"How do you explain an incident at the recent Army airplane display in Washington, D. C., when a member of the Aviation Writers Association, bent on testing the strictness of the regulations, had a stenographer take notes on what he saw? Do you know that a sergeant stopped him and took him before an officer, and do you know the officer gave him additional hush-hush information?"

"We really don't expect an explanation. This is just to call your attention to the unfairness and stupidity of your rules. We are going to express the hope that you will ask that the FBI agents, who are hounding American reporters to determine the sources of their news, be given new assignments. The FBI can find out much of what it wants to know by examining the files of the Army and Navy."

"You know and we know that hush-hush material is 'traded' freely with certain foreign countries. But evidently Mr. Hoover doesn't know. You might enlighten him."

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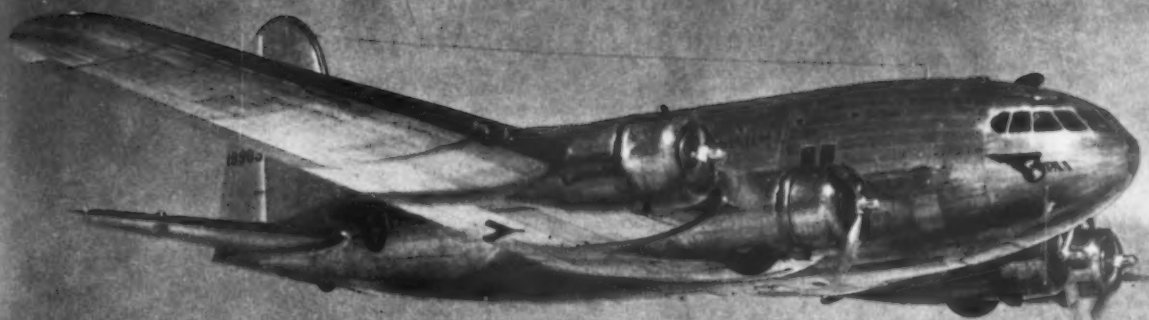
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BOEING is delivering five of the Stratoliners to TWA for transcontinental service, and three, known as "Strato-Clippers" to Pan American Airways. Six more Model 314 Clippers are now under construction for Pan American. Meanwhile, on a steady production line basis, BOEING has been delivering 4-engine Flying Fortresses for the past several months at the rate of one every four working days. Additional orders for still more advanced airplanes of the Flying Fortress type have just been received from the U. S. Army Air Corps.

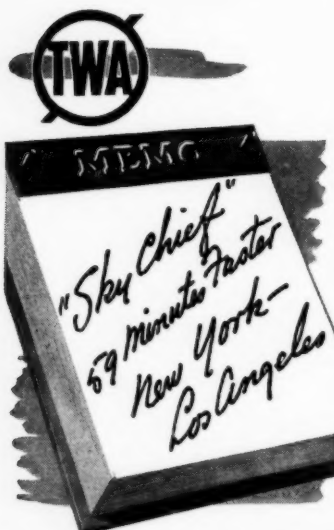
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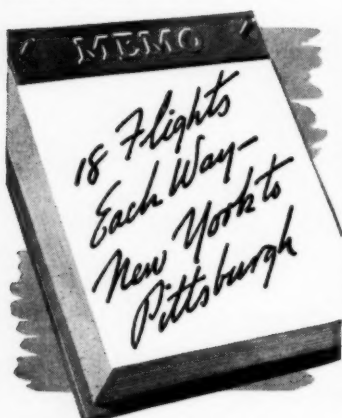


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CAA Examiner Leasure Finds Need for More Atlantic Service; Sees National Defense Benefits; England, France Applications Dismissed Without Prejudice Because of Neutrality Act

Entrance of American Export Airlines into the trans-Atlantic picture with a mail-passenger-property route from New York or Baltimore to Rome via Lisbon and Barcelona was recommended in a proposed report issued Apr. 19 by CAA Examiner C. Edward Leasure.

It was also recommended that Export's applications for routes between the U. S. and England, the Irish Free State and France be dismissed without prejudice, in view of the President's proclamation under the Neutrality Act.

Temporary mail-property service between the U. S. and Rome via Horta, Lisbon and Barcelona, which Export proposed to inaugurate with a twin-engined Consolidated flying boat, is not required by the public convenience and necessity, Leasure said.

Subject to a showing of the availability of the necessary landing rights, Export is fit, willing and able to perform the proposed transportation, the report stated. Export's witnesses testified at the hearing that the company has such rights in Italy. Designation of Charleston and Norfolk as alternate U. S. termini is not necessary, the report added, explaining that the company could land at those points under emergency conditions without a certificate.

The report, one of the most important issued since establishment of the CAA, found that additional air service between the U. S. and Europe is required by the public convenience and necessity, and added that the facilities of Pan American Airways, the present carrier, are inadequate for the business available at present. Pan Am and its affiliates "control practically all American flag foreign air transportation," the report noted.

Pan American intervened in the Export hearing, strongly opposing entrance of Export into trans-Atlantic air service. The intervenor claimed that it can furnish all necessary service at less cost than Export, and that it will have intense competition from foreign carriers.

"It cannot be denied that at the present time the intervenor enjoys a practical monopoly over ocean air travel and, that even when foreign carriers commence operations, it will continue to monopolize these routes, including the north Atlantic, insofar as American competition is concerned," Leasure said.

"The record shows that there is sufficient demand, patronage, and commercial life to increase the services over the north Atlantic air transportation route; and all parties predict a rapid increase in these needs. In addition to the commercial advantages to be gained by American supremacy over this route the Authority must, under the Act, consider the advantages that will accrue to the national defense by the development of our oceanic air transportation systems. Admitting that the anticipated foreign competition would cause the intervenor to be awake to all new developments in aviation, it would appear that the 'sound development of an air transportation system' would be accelerated by competition from an American carrier.

"It must be admitted that the European carriers would not permit us to utilize the benefits of their research and ingenuity; and our own aviation inventors and manufacturers would have greater incentive to encourage and develop their own re-

search and resources with more than one carrier in the international air transport business.

"Competition does not necessarily mean duplication of service unless the field covered by a monopoly is completely served. It is true that where a territory is served by a utility which (1) has pioneered in the field, (2) is rendering efficient service, and (3) fulfilling adequately the duty which, as a public utility, it owes to the public, and the territory is so generally served that it may be said to have reached the point of saturation as regards the particular commodity in which the utility deals, then certainly the trend today is to protect the utility within such field; but when any one of these conditions is lacking, the public convenience may often be served by allowing competition to come in.

"There is no denying that the intervenor pioneered the route in question here and that it is rendering efficient service within the limits of its facilities. However, it is obvious that at present its facilities are inadequate for the business available. Undoubtedly, the saturation point in available traffic is not yet reached and, if its own testimony can be relied upon, such a point is many years away. Furthermore, although this whole discussion is on the basis of north Atlantic traffic generally it must be remembered that the territory to be served by the eastern termini is almost unlimited."

Regarding cost, Leasure pointed out that Export concedes that Pan Am "should be able to furnish two additional frequencies at a lower cost than the applicant can furnish its initial frequencies. The applicant further concedes that the proposed new services would mean an additional heavy annual expenditure by the government. The comparative cost of operation of additional trans-Atlantic air transportation by the applicant and the intervenor, and the additional expense to the government, are factors which, while not controlling, must be considered in relation to the public interest to be served." The report said that in this connection it should be noted that in the Pan Am trans-Atlantic certificate case, in which the CAA held that the public convenience and necessity required the service now operated by PAA, no reference was made to the question of the probable cost of the service.

"The applicant submits that the failure of the Authority to grant its application, would be tantamount to forever closing the door to competition by any American air carrier over the north Atlantic route," Leasure's 76-page report said. "The applicant and its parent company, American Export Lines Inc., expended large sums of money in its most exhaustive planning for its entrance into the trans-Atlantic air transportation business. The applicant contends that if its request is denied at this time, it will be an absolute deterrent to the entrance of American capital into a similar venture in the next few years. There is no question that an adverse decision by the Authority will cause investors to hesitate before risking their money in any subsequently proposed competitive trans-Atlantic air carrier."

In finding mail-property service with the Consolidated boat not required, Leasure stated that the cost of operating such fortnightly trips would be in excess of \$1,000,000 per year. Inasmuch as the primary object of such trips would be the training of personnel, he said that such object "could be better effectuated if the developmental flights were not restricted to the necessity of meeting schedule requirements." Export proposes to operate its mail-passenger-property service, which will be non-

Joins TWA



Mort J. Donoghue, long in newspaper and public relations work, has been appointed director of public relations for Transcontinental & Western Air, Inc., it has been announced by T. B. Wilson, chairman of the TWA board. A member of the bar of the District of Columbia, Donoghue has been managing editor of the "San Francisco Bulletin," on the editorial staff of the "Los Angeles Examiner," managing editor of the "Los Angeles Herald," managing editor of the "Sacramento Union," member of the public relations department of Southern Pacific Railroad, director of public relations for Pacific Greyhound Bus Lines, legislative counsel for the California State Chamber of Commerce (1933-1937) and since 1937 public relations counsel for Braun and Company's western office. A native of Helena, Mont., he attended the University of Montana at Missoula, served in the office of U. S. Senator Thomas J. Walsh in Washington and later secretary to Congressman W. J. McCormick of Montana and graduated from Georgetown Law School. He spent two years in infantry duty in France during the first World War.

Amsterdam-Lisbon Via KLM

Royal Dutch Air Lines (KLM) announced recently that as of Apr. 2 it would inaugurate a twice weekly service between Amsterdam and Lisbon via Oporto to connect at Lisbon with Pan American Airways for New York. The service was expected to be operated with Douglas DC-3 transports, which, after leaving Amsterdam, were to fly outside territorial waters until the Portuguese coast is reached. For the present only mail and freight will be carried, with passenger service included in future plans.

Terry Joins American

Joseph E. Terry, for twenty years in the travel industry, has been appointed to the agency department of American Airlines according to announcement by J. Herman Thellig, manager of the national agency organization of the airline. Terry joined the Cunard Line in 1919, joining Raymond-Whitcomb in 1926 and remaining with this firm until his recent change.

stop between New York and Lisbon, with Sikorsky S44 four-engined flying boats.

Export had also asked approval of acquisition of control of the airline by the steamship company, but Leasure found such approval not necessary. The airline, he said, will have the benefit of the steamship company's traffic organization, meteorologists, etc. "It is concluded . . . that the relationship of the steamship company to the applicant does not restrain competition and will promote the public interest," he stated.

Penn-Central and Braniff Hit New Record Highs in March; All Lines Up

March proved to be one of the best months in air transport history with most lines reporting large increases over any previous March and two companies, Pennsylvania-Central Airlines and Braniff Airways, reporting the greatest month in the companies' history, exceeding the best months of last year. First quarter reports indicated new records were being established throughout the industry.

Penn-Central carried 59% more passengers in Mar. 1940 than March a year ago and 70% more than in February. The first quarter showed a 61% gain over the first three months of last year.

Chicago & Southern Air Lines flew 54% more passengers during the first quarter of this year than in 1939.

United Air Lines reported revenue passenger miles flown were 58.8% above the first three months of last year, while Braniff Airways reported an increase of 75% in passenger miles for the first quarter over 1939. Braniff's previous high month in its history was Dec. 1939, but March was 35.67% over December, pushing the company's figures far beyond any previous month's total.

American Airlines established a new world's record for airlines in March when it carried 54,840 passengers, an 81% gain over Mar. 1939. New York-Boston traffic showed a 125% increase over March of last year. Transcontinental & Western Air showed a 53% gain in March over the same month a year ago.

Mid-Continent Gets 1st Lodestar; Cuts Hour Off Schedules

First of Mid-Continent Airlines' new fleet of Lockheed Lodestar twin-engined 14-passenger transports was flown from Burbank, Cal., to Kansas City, Mo. Apr. 3 at more than 220 miles per hour with Vernon Dorrell, vice-president in charge of operations, at the controls. Thomas F. Ryan III, Mid-Continent president, took formal delivery at Kansas City with civic leaders participating in the ceremony.

With normal cruising speed of from 210 to 220 mph., the Lodestars will reduce the operating time between Minneapolis and Tulsa by one hour.

WAE BUYS DC-3

Company Also Leases Boeing 247-D, Converts a Douglas and Reconitions Ships

Western Air Express, through Charlie N. James, vice-president—operations, has reported the purchase of a Douglas DC-3 transport and the leasing of a Boeing 247-D.

James also announced that one of the company's 14-passenger Douglas planes was being converted into a 21-passenger ship, and a \$200,000 routine reconditioning program of all company planes has just been completed.

Last 4 DC-3's for PCA

Pennsylvania-Central Airlines this month will take delivery of the last four of an order of 10 Douglas DC-3 transports, C. Bedell Monroe, president, stated on Apr. 15. He added that the new planes would be placed on the Washington-Norfolk route in May or early June. Six transports of the original order were placed in service on PCA routes in January.

CCA Ltd. Buying DC-3

Canadian Colonial Airways Ltd. on Apr. 16 reported that financing to the extent of \$200,000 has been arranged for the purchase of a new Douglas DC-3 transport, which will be delivered in June.

C & S Starts DC-3 Service

Service with Douglas DC-3 transports will be inaugurated on May 1 by Chicago & Southern Air Lines on its "Valley Level Route" between Chicago and New Orleans.

EAL Takes 2 Reliants

Two Stinson Reliants have been purchased by Eastern Air Lines from Leech Aircraft Inc., Roosevelt Field, L. I., for use as airline instrument trainers. Ships are powered by 290-hp. Lycoming engines.

Airlines Up Schedules

Substantially increased service on practically all domestic airlines went into effect Apr. 28 with advent of daylight saving time. United Air Lines, American and TWA are each operating four daily transcontinental trips. Examples of heavy service are United's seven New York-Salt Lake City trips, American's 21 Boston-New York and TWA's 12 Pittsburgh-New York.

United Adds Schedules

In Expansion Program

Addition of 13,500 miles of daily scheduled flying is being made on May 1 by United Air Lines. It was announced recently by Harold Cray, vice president—traffic. Total seat miles flown will be increased from 25,000,000 per month to 32,000,000 per month.

Company will operate seven daily flights between New York and the Pacific coast, including four overnight sleepers. Flights between New York and Chicago will be increased to 11 round trips daily. New schedules also call for 12 instead of nine daily trips each way between Los Angeles and San Francisco, and the addition of a fourth flight between San Francisco and Seattle.

Airlines Answer Newark's

Request; Mayor 'Uninterested'

Speaking for four airlines, Capt. E. V. Rickenbacker, president of Eastern Air Lines, on Apr. 15 answered Mayor Meyer C. Ellenstein's request that the lines using Newark Airport provide a revenue to his city of \$135,000 for use of the field.

Capt. Rickenbacker made a counter proposal for the four lines when he offered to pay Newark rates which are in effect at LaGuardia Field, New York City. It was understood that the offer would assure Newark an income of about \$80,000 for 1940, but Mayor Ellenstein said he was uninterested in the offer. He had indicated on Mar. 29 that unless the \$135,000 could be assured, Newark Airport would be closed.

TWA Occupies LG Hangar

TWA's maintenance department on Apr. 13 moved into its new hangar at LaGuardia Field, New York. Officially designated hangar No. 6, the structure at the extreme eastern end of the airport was opened and the work of moving equipment and ships into the new quarters was directed by Maintenance Supt. H. Crowther. TWA's second hangar, which was damaged by fire in March, is expected to be ready for occupancy by June 15. Maintenance operations since the airport was opened had been carried on in an American Airlines hangar.

New Lunken Officers

New air traffic officers at Lunken Airport, Cincinnati, are Edmund W. Biber, chief operator; Lawrence E. Morton, associate operator, and Albert C. Brady, alternate operator.



DOUGLAS 21-PASSENGER PLANES

With its schedules carefully designed to provide the maximum in frequency and convenience, Chicago & Southern offers you quick access to every important city in the Midwest and South—in the greatest comfort, security and luxury now available in modern transportation. This great new fleet of famous Douglas DC-3's has been made possible by the ever mounting popularity of the services offered by Chicago & Southern. Thousands of travelers have saved time and money flying "The Valley Level Route" on both business and pleasure—thousands more will do so, faster, and in greater comfort, during the years to come.

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Air Lines

3 FLIGHTS EACH WAY
CHICAGO TO NEW ORLEANS

Call your travel Agent for
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STEWARDESS SERVICE ON ALL FLIGHTS

News in Pictures



This is the Taylorcraft display viewed by thousands at the recent Chicago Sportsman Show. It is a 65 hp. Lycoming deluxe model furnished by Fox Valley Flying Service of Aurora, Ill., Illinois and Wisconsin distributors. Mr. and Mrs. Jack Snodgrass of Waterloo, Ia., winners of all light plane events at the Miami Air Maneuvers, were on the floor to answer questions and distribute literature.



The first woman who ever flew in an airplane (with Wilbur Wright in 1908), Mrs. Edith Ogilvy Druce, flew for the second time in her life the other day, 32 years later, in an American Airlines Flagship over New York City. She is shown thanking the two pilots.



Capt. Bernt Balchen, well known pilot, and Capt. L. Villardsdahl, of Norway, are shown as they boarded an Eastern Air Lines plane at Newark bound for Washington to confer with the Dept. of State regarding the purchase of airplanes for Norway.



W. H. Maxwell, field manager; Dick Pfennig, eastern operations manager; John McKenzie, dock commissioner for New York; and Harold Crary, vice-president—traffic (left to right) are shown as they appeared at the "house warming" ceremonies held when United Air Lines moved into its new hangar at LaGuardia Field, New York.



Capt. Eddie V. Rickenbacker, president of Eastern Air Lines, gave a dinner in the Kitty Hawk Room at New York Municipal Airport on April 1 just before take-off of the Mexico City Silversleeper inaugurating EAL service from LaGuardia Field. Shown left to right are Capt. Erlon H. "Pete" Parker, EAL pilot; Elmer A. Sperry, Jr., of Sperry Products Co., Sir Hubert Wilkins, Arctic explorer, and Capt. Rickenbacker. Sperry and Sir Hubert were passengers aboard the first EAL passenger plane dispatched from Old North Beach Airport, on April 18, 1939, with a Ford tri-motored transport piloted by Capt. Parker.

BRITISH OVERSEAS CORP. IN CONTROL

Takes Over Imperial and British Airways For Unified Government-Subsidized Operations

British Overseas Airways Corp. took over the activities of Imperial Airways and British Airways under provision of the British Overseas Airways Act on Apr. 1.

The governing body of the corporation consists of chairman, deputy chairman, and members, who form the board of governors. The secretary of state for air has announced in London the membership of the board as follows: Clive Pearson, chairman; Irvine Geddes, deputy chairman; Harold Brown, Gerard d'Erlanger, and W. L. Runciman, the latter being chief executive member and director-general.

Under the director-general are two assistant directors general, one responsible for the territories extending east of England and the other for those extending west. There will be eight departments: administration, finance, public relations, traffic, operations, service engineering, accounts and technical development.

BOA is represented in the U. S. through the operating companies Imperial Airways (Bermuda) Ltd., and Imperial Airways (Atlantic) Ltd., the manager in this country being Paul E. Bewshea, with offices at 620 5th Ave., New York City. The Bermuda service is temporarily suspended but the company expects to resume experimental trans-Atlantic flights in June with the flying boats Cabot and Caribou which operated last year. Landing is to be at LaGuardia Field, New York.

Under an arrangement with the British government, BOA at present operates National Air Communications for the Air Ministry. In addition, it provides two services weekly from the United Kingdom to Australia, four services weekly to India, once weekly to South Africa, twice weekly to Central Africa, once weekly to Hong Kong, once weekly to West Africa, and frequent daily service between London and Paris. In May the service to Australia will be extended to New Zealand. When the trans-Atlantic route is in operation, BOA will have a continuous air route 17,853 miles long.

American-built Lockheeds are used on some of the services, and not long ago extensive purchases were made of Wright Cyclone engines which are to be fitted in some of the larger airliners on various routes.

Eberle to NY Office

Appointment of Frank J. Eberle as New York office manager of Air Express International Agency Inc. has been announced by Chester M. Mayer, president. Eberle handled customs clearance of freight shipments of the Graf Zeppelin and the Hindenburg.

Crary Predicts for 1940

Harold Crary, United Air Lines vice-president, in Los Angeles recently predicted that commercial aviation during 1940 will:

1. Slash fares at least 10%.
2. Increase its business as much as it did last year, about 40%.
3. Open the way for general use of four-engined transports and 13½-hour transcontinental service in 1941.
4. Launch a drive to serve every U. S. city with a vast network of feeder lines.

TWA, United Officers Reelected by Directors

Reelection of officers of TWA for 1940 was announced by the board of directors at a meeting held recently in Los Angeles. Officers reelected include T. B. Wilson, chairman; Jack Frye, president; Paul E. Richter, executive vice-president; L. G. Fritz, vice-president—operations; V. P. Conroy, vice-president—traffic & sales; E. Lee Talman, vice-president & treasurer; J. C. Franklin, secretary, and E. C. Peet, assistant secretary.

Directors also reappointed all hold-over members of the finance and executive committees. Finance group includes Frye, Talman, R. C. Kramer of New York and Sidney Maestre of St. Louis, directors. Executive committee consists of Frye, Richter, Leland Hayward of Beverly Hills, Cal., Nelson S. Talbot of Dayton, O., and LaMotte T. Cohu of New York, directors.

Other directors who attended the TWA meeting included J. L. Eysmans of Philadelphia, Powell Crosley Jr. of Cincinnati and Harold Warner of New York.

W. A. Patterson, president of United Air Lines, told stockholders at the annual meeting held in Chicago in April that passenger traffic in the first quarter of 1940 had exceeded expectations by increasing 50% over 1939 and reported that delivery of the last of the seven new Douglas DC-3 Mainliners, purchased to enlarge United's fleet to 57, would be made late in April.

Directors reelected at the meeting are Martin C. Ansoorge, William A. M. Burden and Joseph P. Ripley, New York; Lester Armour, Mark W. Cresap, Paul M. Godehn, John J. Mitchell, Robert M. Roloson Jr., J. A. Herlihy and W. A. Patterson, Chicago; Frank W. Fuller Jr., San Francisco, and Sumner Sewall, Bath, Me.

Board of directors met later and reelected the following officers: W. A. Patterson, president; J. A. Herlihy, vice-president—operations; Harold Crary, vice-president—traffic; R. W. Schroeder, vice-president—safety; N. B. Haley, treasurer, and P. M. Wilcox, secretary.

PCA Board Elects

3 to Exec. Positions

Directors of Pennsylvania-Central Airlines at the annual meeting on Apr. 17 elected J. J. O'Donovan, formerly vice-president—traffic, a vice-president of the organization; Luther Harris, was elected vice-president—maintenance, and Capt. J. H. Carmichael was elected vice-president—operations. The action followed the annual meeting of stockholders at which Robert J. Wilson, Grand Rapids, Mich., attorney, was elected to the board.

Harris was elevated to vice-president—maintenance from his post as superintendent of maintenance. Carmichael has been serving as director of flying and operations manager.

Directors who were re-elected are: Kenneth H. Bair, William V. Couchman, Frederick R. Crawford, Armand Erp, Lorenz Iverson, George T. Ladd, John L. Loeb, G. Franklin Ludington, C. L. McCune, S. Stewart Mitchell, C. Bedell Monro and R. S. Richards.

CUNNINGHAM TO MCA

Former Braniff Dispatcher to Be Supt. of Flight Control

Appointment of John Cunningham, formerly divisional flight dispatcher for Braniff Airways at Kansas City,



Cunningham

to be superintendent of flight control for Mid-Continent Airlines, was announced Apr. 15 by J. W. Miller, vice-president and general manager. Headquarters will be at Kansas City, Mo. Eleven years in the industry, Cunningham began as traffic representative for the old Southwest Air Fast Express in 1929 at Kansas City. Later he served in the operations division of Rapid Air Lines and joined Braniff in 1931. From 1934 to 1939 he was an employee of the "Kansas City Star." He is married, 33, and a graduate of St. Benedict's College at Atchison, Kan.

AA Transfers Kleiber

Rudy Kleiber, reservations manager at New York for American Airlines, has been appointed reservations manager under the jurisdiction of the southwestern sales manager, according to Charles A. Rheinstrom, vice-president—sales. Kleiber joined American in 1932. E. J. Edison has been named reservations manager in New York. For a number of years he was manager of the airport Consolidated Ticket Office in Chicago.

Airline Folks in the News



Reading from left to right these airline personalities make news this issue: Miss Ruth Haviland becomes the only feminine airline traffic representative in Manhattan with her appointment as head of United Air Lines' women's department in New York City.

John Wiley, formerly with Railway Express Agency, has been appointed assistant to M. T. Stallter, manager of air mail and express for American Airlines at New York Municipal Airport. He's a graduate of MIT with extensive background in air express.

Clifford Mutchler, connected with Transcontinental & Western Air since its organization in 1930, has become superintendent of transportation for the line, heading a new department to supervise all passenger service. He has been assistant to L. G. Fritz, vice-president of operations.

Capt. A. S. "Bert" Mooney, first pilot on the Salt Lake-Great Falls division of Western Air Express recently recorded his millionth mile of flying. In 1932 he became a reserve pilot for National Parks Airways which became part of WAE in 1937.

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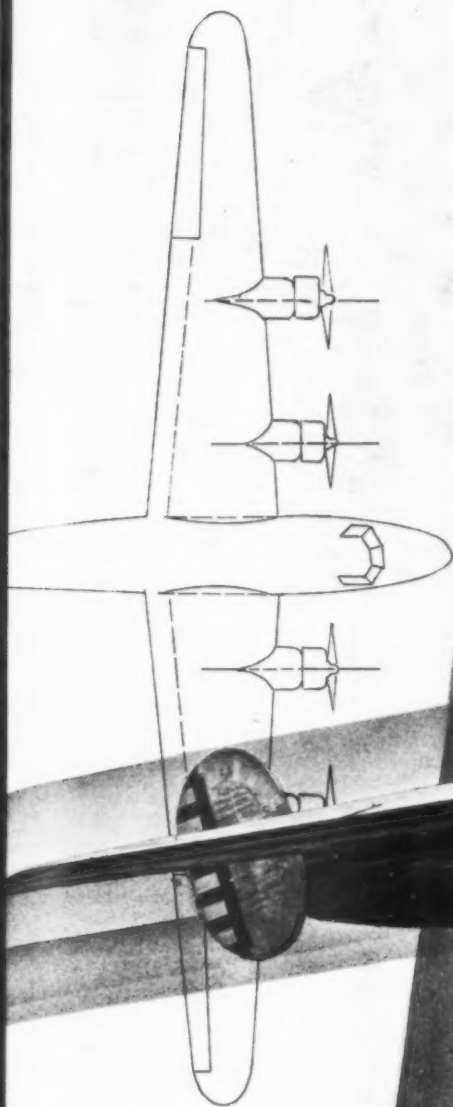
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making speed. Conception
to flight in just nine months.
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The Grumman 'Skyrocket'



Air view of the fighter which Grumman claims is world's fastest and the greatest climber. Official U. S. Navy Photograph.

DORNIER DESIGNS 22-TON SEAPLANE

Flying Range of More Than 5,000 Miles Reported for 1,600-hp., 4-Engine Craft

New German trans-oceanic flying boat designed by the Dornier Works at Friedrichshafen is the "Do 26," a 22-ton craft with top speed of 208 mph. and reported flying range between 4,000 and 5,500 miles. The all-metal cantilever unit which can be catapulted is powered by four Junkers "Jumo 205" diesel type engines delivering 400 hp. each. Total horsepower available thus will slightly exceed that given by just one of the four 1500-hp. engines that powers the 41-ton Boeing 314 craft presently operated by Pan American Airways.

Intended primarily for mail and freight, the new Dornier includes accommodations for four passengers and a crew of four. Fuel compartment for 1,057 gallons is located in the fuselage near the wing center section and marine equipment is to be stored in the bow, next to the crew compartment.

Departure is made in the "Do 26" from earlier models in that retractable wing floats are substituted for sponsons. Spray flaps to decrease landing speed are installed on the wings. The four engines are fitted in tandem pairs to the center wing section, the forward pair being in the leading edge and the aft pair between the spars. Pusher propellers are protected against spray water by the movement of the engines upward for landings and takeoffs.

Specifications for the new flying boat are given as:

Span	98.4 ft.
Length	80.4 ft.
Height	22.6 ft.
Wing area	1,292 sq. ft.
Empty weight	22,487 lbs.
Load	21,605 lbs.
Flying weight	44,092 lbs.
Wing loading	34.12 lbs./sq. ft.
Maximum speed	208 mph.
Cruising speed	192 mph.
Landing speed	68 mph.
Flying range	4,039-5,593 miles

MISSION OFF FOR CHILE

Three U. S. Army Officers Will Assist Instruction in S. American Country

Lt. Col. Omer O. Niergarth, Capt. Robert W. Burns and 1st Lt. Joe W. Kelly, recently designated as an aviation mission to Chile, sailed from New York City for Santiago, Chile, on Apr. 26, according to a War Dept. announcement.

The mission will assist in the instruction of air officers in the Chilean Army. Col. Niergarth, who heads the mission, has been on duty in the office of the chief of the Army Air Corps in Washington.

"These officers are experienced pilots and aviation instructors and are thoroughly qualified for their new duties," the announcement said.

LT. COL. DALLIN CHOSEN

Air Officer Will Manage Philly Airport; Opening Scheduled for June 15

Lt. Col. Victor Dallin, air officer of the 28th division, Pennsylvania National Guard, has assumed management of Philadelphia's newly completed municipal airport following appointment to the \$4,200-a-year job by Mayor Lambertson.

Earlier, the city council's commerce and navigation committee approved an ordinance removing the late Mayor S. Davis Wilson's name from the airport which is scheduled to open about June 15. Personnel approved to operate the port include the manager, three senior radio operators at \$2,200 and three junior operators at \$1,500, plus \$4,000 for general expenses.

Lt. Dallin was manager of the old Philadelphia Airport at Island Ave. and Tinticum Rd. from 1919 to 1924.

Columbia U. Honors Loening

Grover Loening on May 2 will receive the 1940 Egleston Medal for "distinguished engineering achievement." Dr. Joseph W. Barker, dean of the Columbia University school of engineering, has announced. Loening receives the award as an alumnus of the school who has distinguished himself in his profession. Presentation will be made at the annual dinner of the school's alumni.

NAVY PROMOTES THREE

Schildhauer, DeFlorez and McQuiston Recommended for Grade of Commander

Lewis Compton, acting secretary of the Navy, has approved the report of the selection board to recommend the following officers of the Aviation Volunteer Reserve for promotion to the grade of commander, according to a Navy Dept. announcement on Apr. 13.

Lt. Comdr. Clarence Henry Schildhauer, U. S. N. R., of Baltimore, Md., is sales manager of marine equipment for Glenn L. Martin Co. He was graduated from the U. S. Naval Academy in 1918 and served in the Navy until resignation as a lieutenant in 1930. He was appointed lieutenant, U. S. N. R., Feb. 14, 1930, and promoted to lieutenant commander Aug. 31, 1931.

Lt. Comdr. Luis DeFlorez, U. S. N. R., New York City, is consulting engineer of the Texas, the Gulf and Standard Oil of New York companies.

Lt. Comdr. Irving Matthew McQuiston, U. S. N. R., of Waltham, Mass., has been on active duty in the Navy's Bureau of Aeronautics as instructor, training and drilling of the Naval Reserve, since 1930.

Students Compete for Award

Student pilots from 382 out of the 435 colleges taking part in the CAA's civilian pilot training program have already indicated their intention to participate in national competition for the \$15,000 Shell Aviation Scholarships and awards. It was announced on Apr. 18 by Maj. Lester D. Gardner, executive vice president of the Institute of the Aeronautical Sciences.

Presented Cheney Award

First Lt. Harold L. Neely,

Army Air Corps,

stationed at

Lowry Field,

Denver, Colo.,

on Apr. 17 was

presented the

Cheney Award

by Secretary of

War Harry H.

Woodring in

recognition of

heroism in mak-

ing an unsched-

uled landing under

adverse circum-

stances in an effort

to save the life of

a passenger. (See

AMERICAN AVIATION, Mar. 15, for

citation of the act).



GRUMMAN CLAIMS FASTEST FIGHTER

"Skyrocket" Said to Reach 450 MPH and to Outclimb Any Existing Ship Built to Date

With the aid of the Navy the Grumman Aircraft Engineering Corp., Bethpage, L. I., has built a twin-engine fighter which the company states "is capable of speeds well in excess of any fighter—top speeds—that have already been made either here or abroad." The company also states that "it can outclimb any airplane built in the world today, because it has more horsepower per pound of airplane than any airplane ever built."

Although the company could not release performance data, newspapermen and observers surmised that the plane would have to have a speed in excess of 425 mph. to be faster and would probably have to have more nearly 450 mph. to justify such a claim. The ship can climb about 4,500 feet in one minute without using full power but if it can outclimb any existing plane it would have to climb at about a full mile a minute.

Demonstration of the plane—dubbed the "Skyrocket"—took place April 9 on Long Island. Bob Hall was the test pilot. The plane is released for export and is said to be seriously considered by the French as it is the type of fighting craft now in favor in the present war.

An outstanding feature is the heavy cannon carried, there being eight cannon on board with uninterrupted vision and effective firing power from the nose. It carries more armament than any other pursuit.

Powered by two 1200 hp. Wright engines, the all-metal ship is said to be 3,500 pounds lighter than comparable planes. It has a wing spread of about 42 feet and an overall length of about 28 feet. Wing area, as can be seen from the photos, is relatively small. Highest speeds can be obtained at 16,000 feet. With only 70 per cent of available power the fighter is said to be capable of 250 mph. Landing speed is only about 70 mph. by use of split flaps required for landing in small areas such as on aircraft carriers.

It has an additional gas capacity over its normal military load, to increase its range so that it may act as a convoy for bombers on long-range missions. "It protects—intercepts—and its two engines give it the speed and the climb advantages necessary to outmaneuver a single engine plane to get it into the so-called strategic position."

In the demonstration April 9 the plane flew circles around a Grumman single-engine fighter. On take-off the plane left the ground in exactly seven seconds.

Aviation Week in Savannah

Program for the celebration of aviation week at Savannah, Ga., beginning May 13 includes dedication of the airport May 18, issuance of a special cachet on all outgoing air mail, hangar dances, stunt flying, a bombing dropping contest and a number of other activities designed to stimulate public interest in aviation. Chairman of the week long observance is Joseph Perelstine.

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JENSEN AIRCRAFT PLANS AWAITED

Details of Commercial Manufacture
of New Low-Wing Monoplane
Are Expected Soon

Plans for the commercial manufacture of the new Jensen two-place low-wing monoplane, which recently underwent initial flight tests at James Island Airport near Charleston, S. C., are expected to be announced soon by Jensen Aircraft Corp., which was formed early in 1939 for development of the plane.

Designed by Martin Jensen, a veteran of 20 years experience in aviation, and engineered by John F. Nycum, graduate of North Carolina State College of aeronautical engineering, the craft was intended for the low-price field and is said to possess many unusual qualities.

On its test flights, the plane took to the air after a 75-ft. run, climbed sharply and, with a trial propeller, established its cruising speed at 110 mph. and its landing speed at "about 40 mph," Jensen said.

Design is a full cantilever, low-wing monoplane with side-by-side seating. Power is provided by a Franklin 60-hp. engine. Due to the complete absence of external struts and braces and the radical streamlining, it is expected that the craft will cruise 20 to 30 mph. faster than other planes of its class and horsepower.

The new Jensen will fly approximately 30 miles for each gallon of fuel. Upkeep is said to be extremely low because of plywood covering overall. Quietness is realized because of the absence of metal in wing and fuselage.

Fuselage is of semi-monocoque design, employing built-up bulkhead wings and longitudinal stringers, in conjunction with the plywood skin. Engine mount is of webbed steel tube construction and is attached to the fuselage through a four-point mounting lug arrangement.

Wing is of two-spar construction, the spars being of the box-spar type, with upper and lower spruce flanges and mahogany diagonal webs. Both spars extend from tip to tip thus creating a one-piece wing of simplicity and strength.

Landing gear is the single leg cantilever type. Rubber compression discs are used in the shock absorber unit in which no heat treated members are employed. Tail wheel is steerable through the rudder control system and likewise uses rubber discs for shock absorption.

All control surfaces, fixed and movable, are of stressed skin plywood design and the stabilizer unit is full cantilever. Ailerons are of the Frieze type and extend over practically the entire span.

The plane may be disassembled in a very short time by removing the four wing attaching bolts; the fuselage may then be removed, leaving the wing, landing gear and flight control system in one unit.

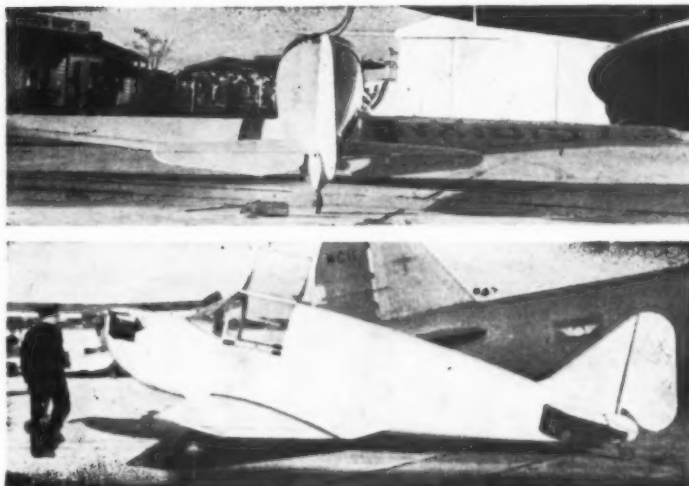
Specifications follow:

Span	.....31 ft.
Length overall	.....20 ft. 2½ in.
Height overall	.....8 ft. 4 in.
Weight empty	.....660 lbs.
Gross weight	.....1,130 lbs.
Gasoline	.....12 gal.
Oil	.....1 gal.
Passengers	.....2
Baggage	.....30 lbs.
Wing loading	.....9.5 lbs./sq. ft.
Power loading	.....18.67 lbs./hp.

Luscombe Adds Showrooms

In addition to present showrooms of Luscombe Airplane Corp. at 247 Park Ave., New York, and 32 W. Hanover St., Trenton, N. J., two more such showrooms have been established. One is at 112 Glen St., Glen Cove, N. Y., and the other at 1018 N. Meridian, Indianapolis, Ind.

The Jensen Low-Wing Monoplane



Two views of the lightplane designed by Martin Jensen, veteran flyer, and engineered by John F. Nycum, at the James Island Airport near Charleston, S. C. It first flew in December and made its official debut at the Miami Air Maneuvers in January.

Oklahoma Tour, May 3-4, Will Feature Lightplanes

The 1940 Oklahoma Air Tour, which will feature light-weight planes, according to Moss Patterson, tour chairman, will take place on May 3 and 4, dates set by the sponsor, the Oklahoma City Aviation Club.

Beginning at Oklahoma City Municipal Airport, the flight will visit 12 cities and towns—Oklahoma City, Shawnee, McAlester, Muskogee, Claremore, Miami, Bartlesville, Tulsa, Stillwater and Ponca City, Okla., and Joplin, Mo., and Coffeyville, Kan. More than 40 planes are expected from Oklahoma, Texas, Kansas and Missouri. Tour will end at Ponca City, May 4, where members will join the Thunderbird Aviation Club at a dinner-dance. The next day, the Thunderbird club will hold its annual air show.

Alabama Tour This Month

The Alabama Air Tour will be held just prior to the 10th annual Birmingham National Air Carnival, which will take place on June 1-2. The tour will end at Birmingham on May 31, and all planes will return to their destination on or before June 3, according to Asa Rountree Jr.

NAA Elects Four New Directors to Board

Four new members of the board of directors of the National Aeronautic Association were elected by the executive committee Apr. 6. Although they will not take office until July 1, they will attend meetings until that time but without power to vote.

Those elected were Thomas H. Beck, president of Crowell-Collier Publishing Co. and chairman of the National Aviation Forum; Brinnall Merchant, president of the Air Reserve Association; Col. Edgar S. Gorrell, president of the Air Transport Association, and Frank A. Tichenor, publisher of *Aero Digest*.

Plans for the first Air Congress under NAA sponsorship at Denver July 7-9 are progressing rapidly. James E. Webb of Sperry Gyroscope Co. is heading the committee preparing for the meetings. William P. Redding, Washington representative of the Denver Chamber of Commerce and NAA treasurer, will be general manager of arrangements.

Luscombe's Silvaire Makes Bow



The new 75-hp. all-metal Silvaire, powered by the Continental fuel injection engine, has been announced by Luscombe Airplane Corp., West Trenton, N. J. Performance figures of the new model show an initial climb of over 1,100 ft. per minute, a cruising speed of 110 mph. and landing speed of 37 mph.

Dual ignition is standard equipment, and brakes, tailwheel, compass, carpet, primer, wheelpants, full upholstery throughout the cabin and other features are standard. Fuselage is striped in a rich maroon color



as is the wing's leading edge. Wings are covered with Grade A Flightex fabric.

Purdue Wins Loening Award at 6th Annual NIFC Conference

Selected as having the outstanding college flying club record last year, Purdue University was awarded the Grover Loening Trophy at the sixth annual conference of the National Intercollegiate Flying Club in Washington, Apr. 8-9. The Purdue Flying Club, which has 44 members, flew 2,614 hours during the year. The University of Michigan won second place, with Stanford and the University of Akron receiving honorable mention.

CAA Chairman Robert H. Hinckley's awards for best essays on "The Cultural Value of Flying" went to Mrs. Florence K. White of Connecticut, \$300; Arthur L. Newman of New York, \$150, and George McMillan of Clemson College, \$50.

New officers elected include Larry Zymunt of University of Detroit, president, and John E. Vaughan of George Washington University, secretary-treasurer. Regional vice-presidents selected are Henry Gaylord of Williams College; John Priddy of Duke University; Hallock Hoffman, Kenyon College, and Frank Martin, Stanford University.

The club named Lock Haven, Pa. for its annual meet for college flyers to be held in June under auspices of the State Teachers' College there. The national meet is to be preceded by state and sectional events throughout the country. Some 70 student pilots and many aviation notables attended the conference.

Holds Double Rating

Nancy Love, wife of Robert M. Love, president of Inter City Airlines Inc., East Boston, Mass., holds a commercial pilot's rating as well as an instructor's rating, instead of a private pilot certificate as stated in the Mar. 1 issue. Inter City is Aerona, Stinson and Fairchild distributor for the New England States.



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Fortnightly Review

(Continued from page 1)

does nothing, the Civil Aeronautics Authority in June becomes a mere puppet bureau within a government department. It is a difficult task this time, for the President does not seek the approval of Congress to effect a reorganization. The order goes into effect *unless* both houses of Congress on their own initiative *disapprove*.

Why, in the midst of an election year, should the President suddenly decide to destroy the independent Civil Aeronautics Authority? What are the motives behind a move which all Washington knows may be political dynamite just at this time? The answer, apparently, is simply that in the background of governmental maneuvers there looms the plans for a single transportation agency to regulate all forms of carriers, and the shift of aviation's agency is the first step in a series of moves to bring about one governmental unit to regulate all transportation.

It may well be that Congress is becoming disturbed at the prospective loss of its legislative prerogatives. For it is not Congress, the people's legislative agency, which is bringing about far-reaching changes within government. The changes are coming, piece by piece, through executive orders, in a manner which might well raise the eyebrows of lovers of democracy. Civil aviation is bewildered by the intricacies and political manipulations in our national capital, but civil aviation has been bewildered before. It is learning now, as it has learned before, that civil aviation is the guinea pig, the line of least resistance, in the curious, mysterious fantasy which comprises government in a vast democracy.

He who believes that civil aviation will retain an independent status within the Department of Commerce is naive indeed. He who thinks that civil aviation can hold its head high and find an important place in the sun while dominated by the Department of Commerce is an optimist indeed. The day the Civil Aeronautics Authority is transferred to the Department of Commerce, civil aviation becomes again fair prey to all of the multifarious political machinations about which it remembers much. Regardless of whatever good intentions the President may have in asking for this transfer, it is worth every ounce of energy civil aviation can expend to fight to the last for independence. Railroad, truck lines, waterway operators—none of these wants a government coordination of transportation into a single unit. And neither does air transport. Neither do the aircraft manufacturers want to face again the costly red tape with which they struggled in the miserably incompetent Department of Commerce. Neither do the pilots and the fixed base operators want the headaches, the sorry inspection system, and the unconstructive regulation of the old Commerce Department.

It won't be "going back" to the old conditions, the President's workers say. Ah, no? What an illusion. There is one evil of all government departments which is never absent—and that evil is the specter of politics. The Civil Aeronautics Authority came the closest to being a non-political institution that Washingtonians ever expect to see. Such agencies come too rarely to have them overthrown so quickly.

The marching orders are posted again. All civil aviation has been drafted to fight again. Stronger in Congress than ever before, strengthened by all that is right and constructive, civil aviation looks to the people's representatives to defend it from the inroads of insecurity, red tape, costly inefficiency, and politics. Let the people's representatives know how you feel.

The National Air Race Problem

ALTHOUGH Newark has evinced some interest in being host to the National Air Races this year, it appears likely that 1940 will pass without a national major air classic. Times, moods, airplanes, speed, aerial novelties, have all changed since the Nationals were first started. Perhaps an era of air racing has closed. But there is, and will be for a long time, a definite need for a national air classic featuring a few time-honored races and—much more important—a display of military aircraft in action. Aviation has much to show the public and the public is interested. A national air show should not be confined to one locality, it should rotate about the country and we understand the War Department would warmly receive such a plan. In view of Steadham Acker's successful efforts in Birmingham in a constructive type of air show which continues to please the public, it seems to us to be sound and logical that the National Aeronautic Association should ask Acker to draw up a suggested five or ten year program. At least he is deserving of a try.

Pessimism

SOMETIME later this year the national capital will open its great new airport now being constructed along the historic Potomac a short distance from the city. There will be parking spaces for 8,000 automobiles, there will be an administration-terminal building second to none in the world, and the airport will take its place as one of the "must" sights of the greatest capital in the world.

The public will read that the airport is "only ten minutes from the heart of Washington." Ten minutes? Yes, if you make the trip about 2 a.m. any morning. Washington is noted throughout the civilized world for having the most abominable street traffic control ever witnessed by mankind. There are only two bridges crossing the Potomac near the airport and the one which gives direct approach to down-town Washington is a narrow structure wholly inadequate for heavy traffic. On ordinary Sundays cars are blocked three abreast for a mile trying to get into the city. The government is building a wasteful and costly Jefferson Memorial—true to style—right along the main traffic artery which will mess things up even more. When the new airport is opened we predict a trip of one hour (minimum) from the field to down-town Washington at busy periods and on Sundays. Not only is Washington's traffic light system more archaic than the oldest building in town, but there is a complete lack of vision in constructing main travel arteries. We predict that much of the usefulness of the new airport will be nullified as far as visitors are concerned by the traffic jams which will be inevitable unless something drastic is done now. Even the Memorial Highway leading to the airport is a pitiful country road compared to what will be necessary. But if anyone thinks that there is one person in the District of Columbia's creaking government intelligent enough to push forward a modern automobile traffic system, he is a futile optimist. The airport itself is being built for the present and future; the highways connecting the airport and city were built for two decades ago. City planners have failed to realize that an adequate airport is only half the job; connections to the airport are just as important if the airport is to have utility. Hence the nation's capital will have the finest airport in the western hemisphere, all at the mercy of untrained traffic policemen, inadequate highways, and the outstanding traffic light absurdity of the United States.

From Bricks to Crocodiles

K. L. M., the Royal Dutch Airlines, is apparently doing a rushing and assorted business with its "skytramp" cargo aircraft. According to *Flight*, the British aeronautical weekly, one such ship arrived at London recently with such oddly assorted things as silver fox furs, skins of all shapes and sizes, diamond dies, wireless parts, machinery, newspapers, oil samples, electron tubes and an oil painting. Another plane brought a full load of pig bristles for hair brushes, while only a few months ago another plane brought three tons of ordinary house bricks from Holland to England.

The Dutch cargo ships have also been useful as flying menageries, transporting everything from performing fleas to 16 foot pythons and fully grown lions. The entire floorspace of one airliner was converted into a big fish tank and filled with water to carry fish from the tropics. On another occasion a dozen baby crocodiles swam unconcernedly in a tank of specially warmed water while being flown from their home in the tropics to England.

The Dutch evidently are the only major airline operators to use cargo ships wherever there is a payload—except for such services as TACA in Central America and the numerous freight services in Alaska and other areas where ground transportation is almost non-existent. The term "skytramp" may well become a common word in the language to supplement the famous tramp steamers plying the seven seas. The Dutch again have proven themselves to be air transport pioneers.

Capital Notes

PERMANENT CONGRESSIONAL COMMITTEES FOR CIVIL AVIATION may be one fortunate outcome of the bitter fight to retain independence of the Civil Aeronautics Authority. A few members of both House and Senate have been trying for several years to arouse sufficient interest in Congress to enact resolutions establishing standing committees which would assure the handling of aviation legislation by those familiar with the needs and problems of the industry. But previous attempts were killed by indifference. Now the situation is quite different.

The President's plan to reorganize CAA is focusing full attention on civil aviation at a time when the record of air transportation shows a perfect safety score and unparalleled expansion. If psychology plays a role in politics, there could be no more propitious time to bring the question directly before the membership. Sponsors of the proposal were quick to realize this and to introduce resolutions creating a special Senate-House committee to study the matter and report on the feasibility of the plan. If the ultimate end is achieved, it may mean that air commerce, still in its youth, may be protected from the haphazard treatment by Congress which darkens the history of development of other forms of transportation.

THE EFFECTIVENESS OF AIRPLANES IN COMBAT absorbed the attention of the Senate Naval Affairs Committee as hearings opened on the House-approved Naval Expansion bill increasing air strength from 3,000 to 4,500 planes. Interest in the comparative value of aircraft and battleships was sharpened by the ominous news from abroad. But war experience so far has not answered this question. Naval officials could tell the Senate only that American planes have outperformed comparable European types.

Admiral Stark, Chief of Naval Operations, pleaded that the expansion program be doubled in view of the turn of events overseas since the bill was passed by the House.

Meanwhile, the Senate received and passed the annual Navy Department appropriation bill, restoring \$15,000,000 in contract authority, eliminated by the House, chiefly for purchase of airplanes for the new aircraft carrier, Hornet. An item of \$2,000,000 diverted by the House to the fund for prototypes was also approved by the Senate for aircraft procurement.

With this appropriation, the Navy expects to have 3,123 planes on hand or under contract by June 30, 1941, including 381 Reserve planes and allowing for 398 losses during 1941. There are now 1,765 serviceable airplanes and funds still available for 171 others to be ordered during the year. Enactment of the expansion program would revise these official estimates upward, if accompanied by supplemental appropriations to begin expansion immediately.

FOREIGN AIRCRAFT SALES ceased to arouse further political opposition over the past two weeks, enabling the Allied Purchasing Board to conclude negotiations with manufacturers for large numbers of pursuit and light bombing planes. Heavier orders are expected to follow in quick succession with estimates of total potential British-French purchases still hovering around the 8,500 figure.

The government won out in the wrangle over allocation of development costs already spent by the Army on planes now released to the Allies. These costs will be added to prices quoted the Allies, plus whatever additional expenses are involved in developing improved types for the War Department to replace those released.

PRODUCTIVITY AND LABOR COSTS in industry, including aircraft manufacturing, transportation and distribution are to be uncovered through continuing studies by the Bureau of Labor Statistics under a bill recently passed by the House and expected to pass the Senate.

This would enable the federal government to know from month to month the exact rate of production and status of employment by industries. It is thought the project may represent a prologue to other legislation, based on the studies, changing wage and hour requirements according to varying conditions of employment.

UNIONIZING OF AIRCRAFT WORKERS is expected to be intensively pursued by the CIO over the coming months. Although the labor organization laid plans last summer for campaigning in aircraft factories, attention was diverted toward building up a "healthy majority" in the automobile industry in anticipation of General Motors elections, recently held. Now it is understood a special organizing committee will be appointed to begin the first serious effort to round up aircraft employees under the CIO aegis.

A definite course of action has not yet been mapped out. It is thought there is small chance of disorder. The government is not likely to tolerate any behavior which may slow down production for the national defense.

A NEW SEAPLANE BASE on the East Coast is expected to be authorized by Congress. The Senate Commerce Committee has recommended a proposed base for Boston harbor as one of a limited number of strategic defense projects in the pending rivers and harbors bill.

It is estimated the base would cost an initial sum of \$2,300,000 and would provide an alternate terminal for trans-Atlantic air commerce. Simultaneously, the Boston airport would be enlarged to accommodate increasing air traffic by using the excavated material to extend present boundaries. Federal money to begin construction, however, is not expected to be appropriated until next year.

ADVANCED CIVILIAN PILOT TRAINING at federal expense is proposed in a bill recently introduced by Senator Clark, Idaho Democrat. The bill incorporates the principles of Al Bennett's plan for enabling young pilots to keep up their licenses and achieve higher ratings. A total of \$10,000,000 would be authorized to furnish student and private flyers with two \$50 coupons a year to finance their training.

Obituary

ORVILLE K. LARSON, 33, well known veteran Alaskan flyer, died on Mar. 21 at Ninilchik, a few miles south of Anchorage on Cook Inlet. Sololung when he was only 13 years old, Larson flew in southeastern Alaska as early as 1926.

ROBERT GILBERT LYON, 44, manager since their establishment in 1934 of Downtown Skyport and Midtown Skyport, seaplane terminals maintained in Manhattan by New York City, died of pneumonia on Apr. 10 at his home in New York. He formerly was associated with Curtis-Wright Corp. and was an air mail pilot at several periods during his life. In 1933 he made the first non-stop flight to Haiti as copilot with Capt. Errol Boyd.

LT. JAMES WARREN PHELPS JR., 26, Army Air Corps flight commander stationed at Selfridge Field, Mich., died on Apr. 3 at Cleveland. He had been an Army flyer for four years.

BOB PRITCHARD DIES

Western Aviation Editor Was in Auto Accident April 2

Robert J. Pritchard, 45, for 14 years editor of *Western Flying*, pioneer western aviation magazine, died April 9 in Dearborn Hospital, Madera, Calif., of complications resulting from internal injuries received in an automobile accident near Madera April 2. The accident occurred when Mr. Pritchard and V. L. Ehrenclou, his long time friend and business associate, were driving back to Los Angeles from a business trip to San Francisco.

After many years on newspapers in Arizona, Texas and California, Pritchard joined the *Los Angeles Times* in 1923 in the oil and mining department. In 1925 he and Mr. Ehrenclou founded the Occidental Publishing Company, publishers of *Western Flying* and five other trade magazines. He was editor of the aviation magazine and editorial director of the company until October 1939, when he went to Baltimore, Md., as public relations director for the Glenn L. Martin Company. He returned to Los Angeles in February of this year to become vice-president and editorial director of Occidental Publishing Co.

He is survived by his widow, Mrs. Fay Pritchard, of 2148 Parnell Avenue, West Los Angeles, the family home; a son, Robert J. Pritchard, Jr., a University of California student, and a daughter, Rhoda Louise Pritchard. Funeral services were held April 13 at the Wee Kirk O' The Heather, Forest Lawn. Interment was at Forest Lawn Cemetery.

CAA INSTRUCTOR DIES

Lloyd Pierce, Ft. Wayne, Killed in First Fatality Involving CPTP Staff

Lloyd Kenneth Pierce, 39, flying instructor in the CAA's Civilian Pilot Training Program at Indiana Technical College, was killed on Apr. 5 near Ft. Wayne, Ind., when his parachute did not open following his jump from a training plane. His student-passenger, Chester R. Smith of Ft. Wayne, jumped safely. Smith was not a CPTP student. Observers believed Pierce did not pull the rip cord of his parachute for fear it would be fouled by the spinning plane.

Operator of Pierce Flying Service since 1935, the instructor had 3,500 flying hours to his credit. The crash was the first fatal accident involving an instructor in the CAA's training program. It was said, and also was the first fatality involving any flying school operated at Paul Baer Municipal Airport, Ft. Wayne, according to Capt. Clarence F. Cornish, airport manager. CAA inspectors and investigators are attempting to determine the cause of the accident.

Correction

It was erroneously stated in the last issue that Nelson Fry had been appointed general traffic manager of United Air Lines at Chicago. The appointment was to the position of assistant general traffic manager.

Aero Bookshelf

AEROSPHERE, edited by Glenn D. Angle; published by Aircraft Publications, 370 Lexington Ave., New York City. \$15 plus shipping charges.

This is undoubtedly the most comprehensive and pretentious volume of its kind ever published in the U. S. Weighing 11½ pounds, printed on good coated paper and bound in blue buckram, the book has no less than 1,420 pages divided up as follows: aircraft engines 844 pages, aircraft 202, statistics 63 and international directory section 274.

There are 2,055 illustrations of all types, including 1,524 engine photographs and cross-sections and 379 photos of planes. The aircraft section features the 721 models currently being made by 217 manufacturers in 26 countries. In the engine section are described over 1,200 distinct designs totaling approximately 3,000 models developed by 644 individuals or firms. All sections are indexed in detail. All in all there is a wealth of material.

The editor is a graduate of the University of Michigan and the author of several authoritative books on aircraft engines. He has been connected with the industry for some time. This new compendium should find a ready use for reference purposes.

DR. BOREN ELECTED

Heads Newly Formed Oklahoma Aviation Association Inc.

Dr. James B. Boren, president of Southwestern State College of Diversified Occupations at Weatherford, Okla.,



Boren

was elected president of the Oklahoma State Aviation Association Inc., at a recent organization meeting in Oklahoma City. Dr. Boren is a brother of Congressman Lyle Boren, aviation enthusiast from Oklahoma.

J. M. Gentry of Enid, Okla. was elected vice-president and John Reading of Oklahoma City, secretary-treasurer. The organization has designated "Taxi-Strip," published by Keith Kahle in Oklahoma City, as the association's official publication. Lacking an official state agency in Oklahoma, the new organization will act as the state's representative on federal airport planning.

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AIR CARRIER RECORD

(C. A. A. Applications, Hearings, Dockets)

Travel Card Investigation Closes

Hearing on the CAA investigation into the air travel card plan, government discount provisions, and other discounts closed Apr. 12. Complete story on page 19.

C&S to Ask New Routes

New routes covering the territory between St. Louis, Memphis and Detroit are to be sought by Chicago & Southern Air Lines. Complete story on page 19.

MCA Gets Bismarck-Minot

Mid-Continent Airlines on Apr. 12 was awarded an extension of AM26 from Bismarck to Minot, N. D. Complete story on this page.

Single NWA Certificate Recommended

Recommendation that a single certificate be issued to Northwest Airlines for its two routes, AM3 and 16, was made Apr. 10 by CAA Examiner F. W. Brown. Complete story on page 19.

Boston-Maine to Argue Rate Decision

Boston-Maine Airways has been granted oral argument before the CAA on its recent rate decision. Date of the argument has not yet been set.

CCA Seeks Glen Falls Stop

Canadian Colonial Airways has filed application with the CAA for a certificate amendment permitting inclusion of Glen Falls, N. Y., as a stop on its New York-Montreal route.

Eastern Air Lines 'Giro Certificate

Eastern Air Lines, which is now operating autogiro service between the Philadelphia Post Office roof and the Camden, N. J., airport under a Post Office contract, has filed application for a CAA certificate covering that operation.

C&S Requests Greenwood Suspension

Chicago & Southern Air Lines is seeking CAA permission to temporarily suspend service to Greenwood, Miss.

Kansas City-Denver Hearing Consolidated

A CAA order on Apr. 17 consolidated for hearing the application of TWA with those of Continental Air Lines, United and Braniff for a route between Kansas City and Denver via various intermediate points.

PO Asks Bids on AAA's Routes

The Post Office Dept. has advertised for bids on the pick-up and delivery routes now operated in Pennsylvania and West Virginia by All American Aviation Inc. Complete story on page 19.

Braniff Asks Kansas City-Washington

Braniff Airways on Apr. 10 filed formal application with the CAA for a route between Kansas City and Washington via Jefferson City, St. Louis, Evansville, Louisville and Lexington. AMERICAN AVIATION, Apr. 15).

United Files Exceptions

United Air Lines has filed exceptions to the recent proposed report of CAA Examiner C. Edward Leasure, which recommended that the company be granted a stop at Red Bluff, Cal., on AM11, Seattle-San Diego, but that other feeder stops be denied.

Continental Mail Rate Hearing

Continental Air Lines requested a boost in air mail pay in hearing before CAA Examiner Robert J. Bartoo, Apr. 8-11. Complete story on this page.

Braniff-MCA Oral Argument

Authority members on Apr. 16 heard oral argument over the advisory report issued by CAA Examiner Francis W. Brown recommending that Mid-Continent Airlines be awarded a route between the Twin Cities, Des Moines, Kansas City and St. Louis. Complete story on this page.

Juneau-Anchorage Route Sought

Alaska Air Lines on Apr. 20 filed application with the CAA for a mail-passenger-property route between Juneau and Anchorage via Cordova and Valdez. The company's headquarters are in Juneau.

Pan Am Directorates

Walter G. Kilner and William H. Standley are seeking approval of interlocking directorates as directors of Pan American Airways Corp., Pan Am Inc., Pan Am (Del.), Pan Am (Nev.) and Pacific Alaska Airways.

T. B. Wilson Approved

The CAA has approved interlocking directorates involving T. B. Wilson and TWA. Wilson also holds positions with All American Bus & Investment Co., All American Bus Lines, Oregon Motor Stages Inc., and Frank Waterhouse & Co. of Canada.

P. M. Davis Directorate

Paul M. Davis has been approved by the CAA in interlocking relationships with Eastern Air Lines and Tennessee Central Railway Co.

Pan Am Directorates Granted

Mrs. A. M. Archibald has been approved as assistant vice-president of Pan American Airways Inc., PAA (Del.), PAA (Nev.), Pacific Alaska Airways and Pan American Airways Corp.; Franklin Gledhill as vice-president and purchasing agent of the same companies; James H. Johnston as assistant vice president and Andre Preister as vice-president and chief engineer.

Horta Mail Rate

The CAA has issued a decision clarifying its original order setting Pan American Airways' trans-Atlantic mail rates. The order sets payment of \$4 per lb. for mail destined for Horta when mail loads exceed 1,600 lbs.

Calendar of Hearings

May 1—Pan American Airways, application for setting of mail rate on third trans-Atlantic schedule. Raleigh Hotel.

May 6—Pennsylvania-Central Airlines, for extension of AM34 to furnish Baltimore-Atlantic City and Atlantic City-Camden service. Carlton Hotel.

May 27—Uraba, Medellin & Central (PAA), application for "grandfather" certificate from Cristobal, C. Z., to Medellin, Columbia. Mayflower Hotel.

June 3—Boston-Maine Airways, application to amend AM27 certificate to include service from Bangor to Moncton, N. B. Roger Smith Hotel.

July 29—New York & Bermudian Air Lines, application for Newark-Bermuda route. Raleigh Hotel.

United Experiments

N. E. Klein, United Air Lines' communications engineer, has disclosed that the line is experimenting with "frequency modulation" radio transmission; a new "high-Q" loop antenna designed to give greater signal strength reception, and an automatic direction-finder.

TWA Invited to LA

Los Angeles, Cal.—J. L. Van Norman, president of the Chamber of Commerce, has invited TWA to transfer its headquarters here from Kansas City, Mo. Jack Frye, TWA president, responded by saying that "the board of directors will give it [the invitation] the utmost consideration. Personally, I like it here."

Braniff Protests Examiner's Approval for New MCA Route

In recommending that Mid-Continent Airlines be awarded a mail-passenger-property route between Minneapolis-St. Paul and Kansas City via Mason City and Des Moines and between Des Moines and St. Louis, the examiner attached too much importance to a local situation and undervalued the public need for long-haul, through, north-south service, Roger J. Whiteford, Braniff Airways counsel, declared in oral argument, Apr. 16, before CAA Members Robert H. Hinckley, chairman, Harlee Branch, Oswald Ryan, G. Grant Mason Jr. and Edward P. Warner.

Examiner Francis W. Brown in his advisory report issued Mar. 16 had recommended that applications of Braniff and Northwest Airlines for routes in the same general territory be denied. MCA, the examiner had urged, is "a feeder line serving cities in the mid-west and affording connections for all of the transcontinental trunk lines" and as such "fulfills an important function in the air transport system which should be encouraged."

Admitting that the examiner had written "a very lucid and competent report," Whiteford based his objections on the underlying philosophy of the recommendations, a philosophy, he said, that recognizes the need for through east-west service and yet denies the public convenience of a similar north-south operation. Braniff, he insisted sought the Twin Cities-Kansas City route because granted the certificate it could then offer through service to points south of Kansas City and to the Pan American Airways' connection at Brownsville. North-south sleeper service which passengers are entitled to, he said, can not be rendered with Braniff-MCA operations connecting at Kansas City, since MCA does not, and will not, have sleeper equipment to interchange.

Rochester, Minn., which was not recommended for a stop on the route should be served by whatever company gets the operation, Whiteford argued. The examiner had suggested that with Rochester having good connecting east-west service it has insufficient need for a new direct route to the south.

To the contention that MCA would lose much of the traffic served by its AM-26 if Braniff were granted a parallel route, Whiteford replied that since Braniff could operate the proposed route with a lower mail rate, MCA could be given boost in postal revenue to sustain the loss experienced on AM-26.

John S. Wynne, MCA counsel, stated that the examiner had reached the only conclusion possible. Granting the certificate to MCA, he explained, does not injure the operations of any airline and at the same time brings new facilities of air commerce to 2,000,000 persons. Braniff's attempt to parallel MCA's present route Wynne charged was in disregard for rights of carriers under provisions of the Act. The Braniff system of expansion, he offered, has no respect for the territory of another company.

Northwest Airlines did not appear to protest the examiner's recommendation.

CCA Ltd. Asks New Service

Canadian Colonial Airways Ltd., has filed application with the board of transport commissioners in Canada for license to operate a scheduled route between Montreal, Three Rivers and Quebec City in the Province of Quebec. It was announced on Apr. 15 by A. E. Low, company president. Company proposes to operate two round trips daily between Montreal, Three Rivers and Quebec City.

CONTINENTAL ASKS HIGHER MAIL PAY

Seeks 44c on AM29, 39c for AM43 at CAA Hearing; Plans Operation With Lodestars

Stating that it will shortly replace its Lockheed 12-A aircraft with three Lodestars, Continental Air Lines is hearing before CAA Examiner Robert J. Bartoo, Apr. 8-11, requested mail rate increases to 44 cents per airplane mile for the first 100 lbs. carried over AM29, Denver-El Paso, and 39 cents per mile on AM43, Pueblo-Wichita. Current rate is 33 1-3 cents on each route.

Continental filed for increases after the CAA had instituted the hearing on its own initiative. The two proceedings, the CAA investigation and CAL's application, were consolidated for purposes of hearing.

Robert F. Six, president of the company, told Examiner Bartoo that the three new Lockheed Lodestars will be placed in operation Aug. 1, 10 and 15. He stated that DC-3 equipment was too large for CAL traffic, but expressed the hope that with continuation of the U. S. airline safety record the Lodestars will be operated with substantial load factors within a short period of time.

The Lodestars will have a higher single-engine ceiling than the 12-A's, according to C. B. Reed, CAL chief engineer and assistant operations manager. The new ships will each be equipped with two Pratt & Whitney SC3G engines of 900 hp. each and will climb to 11,500 ft. with full gross load and one engine inoperative. Reed said, Single-engine ceiling of the 12-A's is 7,350 ft., he added.

CAL will finance purchase of the Lodestars in part by the sale of \$75,000 of unissued company stock, Six stated. Also by returning to Lockheed Aircraft Corp. the three 12-A's being replaced, CAL is to receive \$21,000 per airplane minus radio equipment, which is being transferred to the Lodestars. As part of the deal CAL is to obtain from Lockheed two small planes, which Six suggested would be sold quickly for about \$3,000 each. Cost of the new equipment is approximately \$334,000.

Depreciation of the Lodestars will be over five years, but a used one to be acquired in May will be over four years, Six stated, adding that the used Lodestar is actually a re-made Northwest Airlines' Lockheed 14.

Plan for the construction of a new hangar by the city of Denver to provide adequate facilities for CAL and United Air Lines was described by Six, who stated that Denver has agreed to issue \$300,000 of revenue bonds to cover the cost of building which is expected to start June 1. Completion is expected Oct. 1. CAL and UAL will share the hangar equally, each signing a 25-yr. non-cancelable lease with the city. Monthly rental will be \$750 each, plus a \$25 monthly landing fee for each schedule operated.

Other company witnesses were Robert H. Purcell, CAL vice-president-secretary-treasurer, and C. C. West, Jr., general sales manager. Counsel were John S. Wynne for CAL, and E. T. Nunnally, Jr. for the CAA.

Mid-Continent Gets Bismarck-Minot Line

Extension of Mid-Continent Airlines' AM26, Tulsa-Bismarck, from Bismarck to Minot, N. D., a distance of 150 miles, was ordered by the CAA on Apr. 12.

The CAA, in upholding its examiner's recommendations, established the extension as provided for in section 401(e)(2) of the Civil Aeronautics Act. Under this section, the carrier was not required to show convenience and necessity for the route.

Dakota Air Transport originally sought the line, but withdrew its application following an unfavorable examiner's report.

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Central Bureau to Handle All Air Travel Card Plans Proposed by TWA

Establishment of a central bureau to handle air travel card plans for all airlines was proposed by TWA at the four-week hearing on the CAA investigation of the plan, government discount provisions and other discounts closed Apr. 12.

Retention of the plan was urged by all airlines except TWA. The latter company told CAA Examiner F. A. Law Jr., that the plan in its present form is adverse to the public interest.

E. Lee Talman, vice-president-treasurer and director of TWA, testified that a central bureau should be separately incorporated, but owned and managed by the Air Transport Association. Functions of the bureau would be to (1) handle all credit investigations, (2) handle routine for collection follow-ups, (3) handle issuance of cards, billings, etc., (4) handle preparation and filing of tariffs, and (5) decide who is entitled to contracts and cards. Expenses of the bureau, Talman said, would be shared by the airlines on the basis of revenue derived. TWA claims that the bureau would eliminate competitive features of the present plan, and result in definite economies.

Vincent P. Conroy, vice-president-sales-traffic of TWA, told Examiner Law that "as long as the balance of the industry is a party to a plan of this kind, it would be virtual suicide for TWA to withdraw." Prior to Jan. 1, 1939, there was a liberal use of the holding of cards, he said, adding that the airlines "tried to outstrip each other in adapting cards to new sources of revenue." The plan gives a discount to persons best able to pay full rates, the witness stated. He favored a "very thorough" study of the general rate structure by the CAA. The plan is now dominated by American Airlines, he claimed.

The desire for creative selling on

the part of travel agents has been nullified by the plan, Conroy said, expressing the opinion that the airlines cannot effectively develop their market without the help of outside agents. These agencies can be of great help in off-line points, he said. The travel agents were represented at the hearing in opposition to the plan, under which they do not receive a commission on tickets.

Plans used by other forms of transportation were explained by H. A. Siddall, chairman of the Transportation Passenger Association, and the Western Passenger Association, railroad organizations; John F. Brennan, passenger manager of United States Lines, and L. G. Markell, of the National Bus Traffic Association. Commenting on the fact that 50% of airline revenue is from the card plan, Markell stated: "It definitely indicates to me that the plan is not sound and needs modification." Brennan said: "If we had that situation in our business, I would feel that there was something wrong with our rate structure."

Testimony in favor of the plan was given by Paul Brattain, vice-president of Eastern Air Lines, who called it a "selling tool, and the only selling tool which we can place in the hands of our salesmen." Although the 15% discount is an important feature and would detract from the effectiveness of the plan if eliminated, convenience and other advantages also are important, he said.

Howard Westwood, attorney for the Air Transport Association, representing the carriers favoring the plan, told Examiner Law that the subcommittee of the Air Traffic conference has adopted a resolution changing, after June 1, 1940, the form of the card—eliminating the issuing carrier's name from the front, putting it on the back. Names of all airlines will be on the front, he added.

New Routes to Be

Sought by C & S

Applications for new routes covering the territory between St. Louis, Memphis and Detroit are to be filed with the CAA by Chicago & Southern Air Lines, according to announcement by Carleton Putnam, president of the company.

Operations sought are (1) St. Louis to Detroit via Terre Haute and Ft. Wayne, Ind.; (2) St. Louis to Detroit via Terre Haute, Indianapolis, Anderson-Muncie and Ft. Wayne; (3) St. Louis to Detroit via Evansville, Cincinnati, Dayton and Toledo, and (4) Memphis to Detroit via Paducah, Evansville, Indianapolis, Anderson-Muncie and Ft. Wayne.

Chicago & Southern plans to move its general offices and main overhaul base to Memphis during the latter part of this year.

Single Certificate

Favored for NWA

Recommendation that a single certificate be issued to Northwest Airlines for its two routes, AM3, Fargo-Seattle, and AM16, Chicago-Winnipeg, was made Apr. 10 by CAA Examiner Francis W. Brown at the conclusion of a 10-minute hearing on the matter.

Brown stated that a single certificate will eliminate "an artificial division in the operations of Northwest." Certain NWA schedules will not stop at Fargo, but that city has indicated that it has no objection to a single certificate. The Post Office Dept. also has indicated no objection.

Bids to Continue

All American Routes

Asked by P.O. Dept.

The Post Office Dept. on Apr. 10 advertised for bids for a pick-up and delivery feeder air mail service on the two experimental routes now operated by All American Aviation Inc., in Pennsylvania and West Virginia.

All American's one-year PO contract expires May 14 and it has appeared improbable that the CAA will have rendered a decision on the company's application for a certificate by that time. To offset the possibility that AAA might have to cease operations for lack of a certificate, the PO is going through the legal formality of advertising for bids for an operation of three months with options to extend for three additional periods of three months each for a maximum of one year.

There is a proviso in the advertisement, however, that the contract expires automatically with the CAA decision approving or refusing a certificate to AAA.

UAL Boeing Fare

United Air Lines on Apr. 10 inaugurated a special fare, good only on Boeing 247-D equipment, of \$13.90 one-way and \$25 round trip between Los Angeles and San Francisco. The fares, which were vigorously opposed by TWA, are on a six-month experimental basis. United's DC-3 tariffs between San Francisco and Los Angeles are 26% higher than the above.

Personality!



TEN YEARS AGO—AND TODAY


*On May 15, 1930, a smartly uniformed young woman stood at the door of a United Air Lines plane, in San Francisco, welcoming its enplaning passengers. The first stewardess ever to fly the airways began doing her part in building United Air Lines' tradition of hospitality.

Today her successors carry on that tradition aboard United's famous Mainliners. To simple courtesy they bring the charm and warmth of a friend; the skilled thoughtfulness of a gracious hostess.

And in that they reveal the attitude of every member of United Air Lines, regardless of his job, aloft or on the ground. Their aim is to make each passenger want to say at the end of his flight: "That was the finest trip I have ever taken".

That is what gives Mainliner service its unique character and personality. Back of it stands United's unmatched record of 165,000,000 miles of flying—devoted to perfecting Mainliner service so that each trip on United Air Lines will provide the reason for wanting to take another.

UNITED

AIR  LINES

Florida Draws

(Continued from page 1)

vealed by Mayor A. C. Hatch. First year's production schedule has been set at 100 planes, including the employment of 65 persons with an annual payroll of \$125,000. Company will build a low-wing monoplane, a side-by-side, two-place craft which will sell for approximately \$3,000.

President of the Babcock organization is Fred L. Foster, former head of Richfield Oil Co.'s aviation department. V. C. Babcock of Akron, O., is vice-president and chief engineer of the firm. He said his Airmaster type of ship, which he built in Akron, will be produced with improvements. He also is building a smaller and less expensive ship of the pusher type with tricycle landing gear.

A spokesman for the Florida State Chamber of Commerce has indicated that negotiations are underway with several other aircraft manufacturers who have evinced interest in locating in the south.

Florida C. of C. Aviation

Committee Is Appointed

Announcing the appointment of the Florida State Chamber of Commerce aviation committee, Apr. 3, Carl D. Brorein, chamber president, reported that three aircraft manufacturers are considering or have already committed themselves to a location in the south.

The newly selected Florida aviation committee for 1940 includes M. M. Frost of Tampa, chairman; T. P. Caldwell, A. E. Curtis and J. E. Yonge of Miami; J. A. Waterman, Tampa, E. C. Nilson, Orlando; E. R. Bentley and Ray Clements of Lakeland; H. C. Whitney and Charles B. Griner of Jacksonville; C. W. Ruckel, Valparaiso; Z. A. Geiger, Pahokee; Francis Taylor, Pensacola, and J. T. Baker, St. Petersburg.

Jacksonville Committee Formed

Jacksonville, Fla.—Raymond W. Cushman has been named chairman of a new chamber of commerce standing committee on aviation. Other committee members are Lt. Col. Lynwood Evans, vice-chairman; J. M. Bradford, V. M. Covington, J. F. Early, Thomas C. Imeson, F. P. Lilly, W. M. McCrory, R. M. Smith, Carl S. Swisher and Joseph H. Walsh.

Kansas Citizens Elect

Newly elected officers of the Kansas City, Mo., unit of WNAA are: Margaret Potter, pres.; Vinita Underhill, v. p.; Ella Sittler, treas.; Terese Rhiner, recording secy.; Lee Saunders, corresponding secy., and Moore Coats and Ann Nafe, three-year board members.

Senator Worth Clark Introduces Bennett Pilot Training Plan

Sen. D. Worth Clark (D., Ida.) has introduced into the Senate a bill based upon the plan promoted by Al Bennett, fixed base operator and flying school operator of Highstown, N. J., by which the government would sponsor a pilot training program with a much broader base and appeal than the present Civilian Pilot Training Program. Known as the Bennett Plan, it was suggested by Bennett two years ago and has received considerable attention throughout the country.



Bennett

Under provisions of the bill the government would provide two coupons valued at \$50 each to be issued by government medical examiners to each applicant when he qualifies for a student pilot's permit and to each non-commercial pilot at the time of his annual license renewal. When the pilot solos he would redeem the first \$50 coupon for cash and the second coupon when he completes his 10 hours. If the pilot has already soloed, he would redeem the first coupon upon completion of his next 10 hours and the other upon completion of his second 10 hours each year.

Bennett asserts the plan would teach 100,000 to fly and provide 20 hours of flying each year thereafter for \$10,000,000 annually. It would not only train new pilots but would provide for continuation of flying for those who have already learned to fly. He believes the plan would greatly stimulate business for all certified flying instructors and would increase the number of airports. Anyone over 16 years of age would be eligible.

Charles Colvin Joins U.S. Weather Bureau

Appointment of Charles H. Colvin, former head of Kollsman Instrument Division, to the technical staff of the U. S. Weather Bureau, was announced April 15 by Comdr. F. W. Reichelderfer, bureau chief. He assumed his duties April 22. He will be a special assistant to the chief of the bureau and consultant in the development of aerological instruments, and will be in charge of the engineering and procurement activities of the bureau for meteorological equipment in general.

For many years Mr. Colvin has been engaged in the design, development and production of aircraft instruments and other equipment. He has been active in the Society of Automotive Engineers, the Institute of the Aeronautical Sciences and other organizations.

Oregon Board Retains Rosenberg as Director

The Oregon Aeronautics Board has voted to retain Devaney Rosenberg as state aeronautics director, but Gov. Charles A. Sprague has expressed himself as not being entirely satisfied with the board and has indicated the next legislature may be asked to abolish it.

Governor Sprague removed four of the five members of the old board last fall, at which time Allan Greenwood was dismissed as state inspector. Rosenberg was named by the governor to succeed him. Present members of the board told the governor a state board was important, particularly in obtaining federal aid.

New Boeing School Instructor

Robert J. Macdougall has been added to the staff of flight instructors of Boeing School of Aeronautics, Oakland, Cal.

CAA Student Pilot Training Program Builds Up Phenomenal Safety Record

The Civilian Pilot Training Program by which over 10,000 American youth are being trained to fly under sponsorship of the Civil Aeronautics Authority, has established a record for safety so far beyond all previous records as to be a statistician's heaven. The CAA reports that by Apr. 15, 1940, the CPTP ranked as follows in comparison with the calendar year figures for instructional flying generally:

1937—One fatality per 4,000 hrs. or 280,000 mi.
1938—One fatality per 6,000 hrs. or 420,000 mi.
1939—One fatality per 8,000 hrs. or 560,000 mi.
CPTP—One fatality per 300,000 hrs. or 21,000,000 mi.

Considering the haste with which the program was necessarily put together, plus the lack of precedents and the hundreds of training centers involved, the CAA believes the CPTP safety record to be even more of an accomplishment than the airline record of over 814,000,000 miles with no fatalities. The student flyers are chalking up about 30,000 hours of flying a week.

C. A. A. ACTIONS

(Pilot Certificates, Letters of Authority, Publications, Miscellaneous. For Airline Regulation, See Air Carrier Record. Serial Numbers of Orders and Dates in Parentheses.)

Pilots

Revocations

Richard G. Purcell Jr., Burbank, Cal., solo pilot certificate 66666 revoked for piloting an aircraft on a civil airway over a congested area at an altitude not sufficient to permit at all times an emergency landing outside of such area in the event of complete power failure, and other violations of the Civil Air Regulations. (Apr. 2, 457).

Jack R. Thornton, Paragould, Ark., student pilot certificate 40080 revoked for piloting an aircraft on a civil airway carrying a person other than a certificated instructor actually giving instruction, and other violations of the CAR. (Apr. 2, 458).

Alfred E. Ellis, Iowa City, Ia., student pilot certificate 74763 revoked for piloting an aircraft on a civil airway outside an area within a 25-mile radius of his point of take-off, and other violations of the CAR. (Apr. 2, 459).

James H. Layne, Van Nuys, Cal., student pilot certificate 59350 revoked for piloting an aircraft on a civil airway carrying a person other than a certificated instructor actually giving instruction, and other violations of the CAR. (Apr. 2, 460).

Paul E. Piche, New London, Conn., student pilot certificate 78210 revoked for piloting an aircraft on a civil airway outside an area within a 25-mile radius of his point of take-off, and other violations of the CAR. (Apr. 2, 461).

William F. Eckels, Alton, Ill., student pilot certificate 73397 revoked for piloting an aircraft on a civil airway carrying a person other than a certificated instructor actually giving instruction, and other violations of the CAR. (Apr. 12, 478).

Suspensions

Harold Anderson, Wolf Point, Mont., solo pilot certificate 44586 suspended for a period of 120 days for piloting an aircraft carrying a person other than a certificated instructor, and other violations of the CAR. (Mar. 29, 453).

Alva W. Spiva, Wichita, Kan., parachute rigger certificate 522 suspended for carelessness and inattention to his duty in his inspection and packing of a parachute. (Apr. 2, 462).

Ralph C. Mangum, Ely, Nev., solo pilot certificate 72921 suspended for a period of 60 days, and thereafter until such time as he shall have demonstrated to the satisfaction of a designated CAA representative that he is thoroughly familiar with parts 01, 20 and 60 of the CAR, for piloting an aircraft acrobatically over an airport without being equipped with a parachute, and other CAR violations. (Apr. 9, 476).

Civil Penalties

The following orders in compromise of civil penalties for certain violations of the Civil Aeronautics Act and the CAR were accepted by the CAA: (Apr. 2, 455). Ralph H. Barry, Saginaw, Mich., for piloting an aircraft on a civil airway before said aircraft had been rated as to airworthiness following an accident in which it was involved, and other violations, \$50; William F. Eckels, Alton, Ill., for authorizing the flight of his registered aircraft on a civil airway when it was not certificated as airworthy, \$25; Arthur L. Howarth, Portland, Ore., for piloting an aircraft on a civil airway without being possessed of a valid pilot certificate, \$50; Warren C. Prosser, Denver, Colo., for piloting an aircraft on a civil airway when said aircraft was not certificated as airworthy, and other violations, \$25; Stewart W. Ralston, Minersville, Cal., for piloting an aircraft on a civil airway carrying a person in excess of the number specified in the airworthiness certificate of said aircraft, and other violations, \$100. Also (Apr. 2, 456). Duncan A. McIntyre, Tulsa, Okla., for taking off from an airport at a time when there was risk of collision with other aircraft during such take-off, \$100; Dr. R. W. Naudack, Monte Vista, Colo., for piloting an aircraft on a civil airway without being possessed of a valid pilot certificate, \$100; and (Apr. 9, 468). Paul M. Bradley, Seattle, Wash., for piloting an aircraft on a civil airway at an altitude of less than 500 ft., and other violations, \$50.

Roy Donley, North Hollywood, Cal., for piloting an aircraft on a civil airway at an altitude over a congested area insufficient to permit at all times an emergency landing outside of such area in the event of complete power failure, \$25; Lewis A. Jackson, Marion, Ind., for piloting an aircraft in weather below the minimums prescribed for contact flight without being possessed of an instrument rating and when said aircraft was not equipped for instrument flight, \$25; Harold H. Reese, Des Moines, Ia., for piloting an aircraft on a civil airway carrying a person other than a certificated instructor actually giving instruction in violation of the terms of his solo pilot certificate, \$25; Neal Umholtz, Oakland, Cal., for piloting an aircraft on a civil airway after sundown although said aircraft was not equipped with proper navigation lights, \$25. Also (Apr. 9, 469). Norman Cathcart, San Francisco, Cal., for piloting an aircraft on a civil airway after sundown when the aircraft was not certificated as airworthy and was not equipped with navigation lights, \$25.

Show Cause

Russell O. Tilton, Lakewood, N. J., has been directed to appear before a CAA examiner and show cause why his student pilot certificate No. S-99762 should not be revoked or suspended for starting the engine of an aircraft without a competent operator in said aircraft attending the controls, and without blocks placed in front of said aircraft, and other violations of the CAR. Apr. 12, 477.



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Hugh Robbins and Associates Plan to Build Non-Spin Low-Price Plane

Midland Aircraft Company, with Hugh C. Robbins as president, has been formed in Chicago to manufacture a light two-place airplane said to be of revolutionary design and is at present studying available factory sites in two-score mid-western cities. Mr. Robbins, formerly of Cleveland, O., recently resigned as a director and secretary-treasurer of the Continental Aeronautical Corporation, Burbank, after that concern was sold to Lockheed Aircraft Corp. Temporary offices have been established in the Metropolitan Building, 134 North LaSalle St., Chicago.

As soon as a factory site is found, probably not later than May 15, the company proposes to erect a \$200,000 to \$250,000 plant. With Robbins is E. M. Lustig, production manager, and A. E. Kangas, former chief auditor for Continental.

Mr. Robbins said the projected plane, mounted on a tricycle landing gear, will incorporate "extensive use of plastic materials with a safe-stall, non-spin high monoplane wing." He said that through mass production and extensive use of plastics he expects to be able to produce a ship "to sell at a price far below those offered by competitors in the same class."

Hildebrandt Appointed

U. S. Air Compressor Co. of Cleveland, through its general manager, Kenneth Clapp, has announced the appointment of T. T. Hildebrandt, Woodward Bldg., Washington, D. C., as its governmental representative. Hildebrandt also is Washington representative for Jacobs Aircraft Engine Co.

Harvey Joins Haller

Emil K. Harvey has become director of the airport consulting division of Haller Testing Laboratories, Inc., New York City. He has been employed by a number of airport companies, acted as airport consultant and taught for seven years the first course in airport design and construction at the Daniel Guggenheim School of Aeronautics, New York University.

MCA Promotes Brown

R. L. Brown, chief pilot for Mid-Continent Airlines, was promoted to superintendent of flying in charge of all flight operations on Apr. 15. It was announced by Vernon A. Dorrell, vice-president in charge of operations. Brown, now only 29, has been flying for 13 years and has been with Mid-Continent since 1935. Prior to that he had flown for Bennett Air Service at Okmulgee, Okla., Southwest Air Fast Express and United Air Lines. He is a reserve officer in the Army Air Corps Reserve.

Editor Joins R. C. A. F.

Ted Booth, editor of Canadian Aviation for three years, recently resigned to join the R. C. A. F. New editor of the monthly is Ronald A. Keith.

Curtiss-Wright's Transport in Test Flights



Above: The name of Curtiss-Wright again appears on an airline transport airplane as the 36-passenger twin-engined transport built by the St. Louis Airplane Div. makes its first test flights. With two 1,700-hp. engines—more powerful than any now in use on commercial airlines—the transport is making its bid in the field occupied now by Douglas and Lockheed.

Below left: E. R. Smith, CAA inspector, is shown at left presenting to C. W. France (center), vice-president and general manager of the St. Louis division of Curtiss-Wright, experimental license NX-19436. W. J. Moulder, chief inspector of the factory, looks on.

Below right: Here is the test crew of the transport which made the first flight Mar. 26. Left to right, Willis Wells, test pilot for the St. Louis division; Edmund T. Allen, test pilot in charge of the initial flight, and Dean C. Smith, veteran airline pilot and sales director for the St. Louis division.

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OCCUPATION

General Tire Business Good

The year just closed was the best in the history of the company, and generally for the tire industry as a whole, according to W. O'Neil, president of General Tire and Rubber Co., Akron, O.

Flying Service Reorganized

Lexington (Ky.) Flying Service has been reorganized with J. Tyler Thomas as president and general manager; John O. Brennan, vice-president, and William Frehse, secretary-treasurer.

Express Shipments Up 25.5%

Nation-wide air express for February increased 25.5% in shipments and 27% in gross revenue over Feb. 1939, the Air Express Div. of Railway Express Agency reported on Apr. 15. Shipments for the month totaled 71,373.

Beech Aircraft Corp.

Wichita, Kan.—Company recently delivered two 450-hp. biplanes for the department of transport of the Canadian government at a cost of \$40,000. Firm also announced completion of another type F-2 twin-engine Beechcraft equipped for aerial photography and constructed for the U. S. Army Corps.

Domestic Air Carrier Operations

(CAA Figures)

	January 1940	February 1940	February 1939	% over Feb. 1939	Jan. & Feb. 1940	Jan. & Feb. 1939	% over 1939
Companies operating	17	17	18				
Companies reporting	17	17	18				
Rev. miles flown	7,271,154	6,672,914	5,031,767	32.62	13,944,068	10,484,860	32.99
Rev. passengers	136,282	126,840	72,496	74.96	263,122	152,840	72.16
Rev. passenger-miles	55,231,952	53,033,612	31,064,140	70.72	106,265,564	65,535,935	65.20
Express (lbs.)	463,898,988	422,394,234	349,218,080	23.45	886,293,222	703,718,160	25.94
Available passenger seat-miles	110,166,337	103,266,684	68,068,526	51.71	213,433,021	141,794,459	50.52
Revenue passenger load factor	50.14	51.36	45.64		50.73	46.22	

9 New Types Introduced

Elastic Stop Nut Corp., 1015 Newark Ave., Elizabeth, N. J., has announced an expansion of its line through the introduction of nine new types of nuts all of which embody the Elastic Stop self-locking element, a resilient non-metallic collar built into the head of the nut. An illustrated catalog, containing complete listings and an explanation of the Elastic Stop principle, will be sent by the manufacturer on request.

SUMMARY OF U. S. AIR TRANSPORT OPERATIONS FOR FEBRUARY

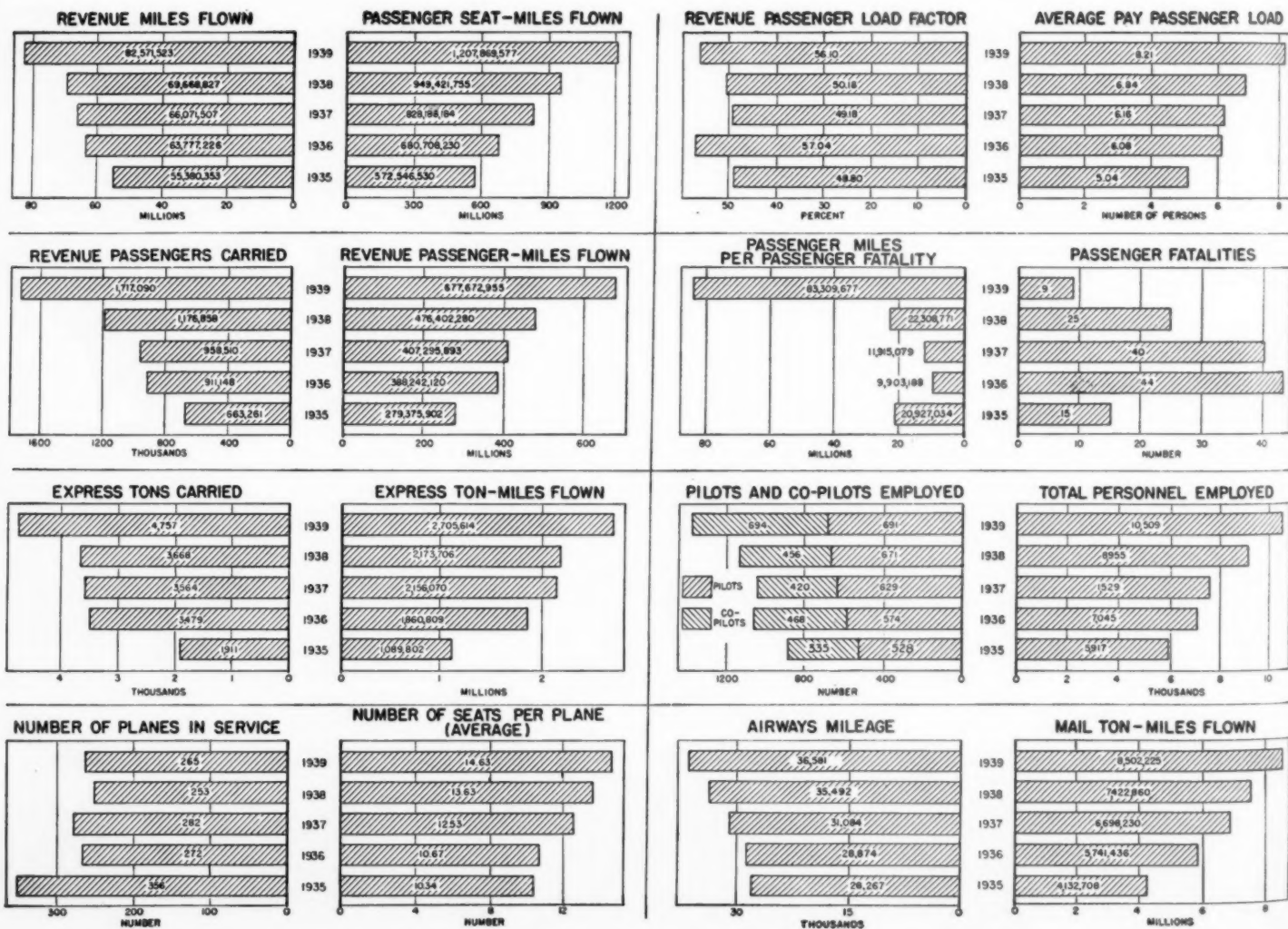
(Compiled and Mileage Costs Computed from CAA Reports^a)

Complied and Savings Costs Computed from CAA Reports													
	Rev. Pass.	Rev. Pass. Miles	Avail. Seat	Pass. Load Factor	Pass. Revenues	Exp. & Frt. Lb.-Miles	Mail Lb.-Miles	Mail Revenues	Operating Revenues	Operating Expenses	Cost per Mile Fl.	Net Income (Before Inc. Taxes)	Total Assets
American	39,737	15,118,819	24,981,156	60.59%	\$ 771,636.88	121,056,302	357,163,872	\$297,380.31	\$1,119,184.18	\$1,064,171.66	\$ 55	\$ 49,424.35	\$10,206,441.24
Boston-Maine	1,285	203,309	553,900	36.70%	11,241.83	227,488	897,977	25,957.32	38,855.03	31,511.21	\$ 53	7,287.65	385,088.78
Brant	5,767	1,888,489	3,807,277	49.60%	88,191.05	9,996,424	40,337,939	61,863.37	154,182.01	169,282.42	\$ 55	15,823.85 (red)	1,325,461.71
Chicago & Southern	1,541	388,461	917,392	61.14%	26,937.24	3,030,972	18,548,845	28,993.93	55,730.87	71,531.68	\$ 60	15,841.79 (red)	608,797.01
Continental	774	239,474	680,199	36.27%	10,636.10	358,755	4,076,068	27,558.05	38,717.58	38,705.15	\$ 41	184.93 (red)	399,851.65
Delta	889,386	1,338,300	51,811	1.30%	30,402.81	1,930,448	18,813,523	33,373.20	69,269.52	64,136.73	\$ 44	5,425.25	451,161.75
Eastern	25,943	13,517,472	21,831,466	61.92%	724,431.70	73,201,959	230,555,993	153,612.41	916,203.46	702,424.48	\$ 59	214,397.72	5,792,336.17
Inland	515	132,634	661,160	19.47%	5,403.06	179,960	1,620,907	22,629.38	38,165.80	38,863.74	\$ 56	10,620.15 (red)	315,451.89
Inter-Island	3,041	301,251	446,879	67.41%	31,480.63	1,481,612	367,798	3,560.05	36,614.23	34,422.58	\$ 1.08	2,088.32	523,714.87
Marquette	34	7,875	36,852	21.37%	417.55	43,372	4,368.55	33,771.74	426.94	9,606.24	\$ 1.49	9,179.30 (red)	53,612.25
Mid-Continent	1,843	286,514	888,720	29.00%	11,254.69	638,432	4,368.55	33,771.74	426.94	9,606.24	\$ 1.49	9,179.30 (red)	53,612.25
National	1,896	426,821	876,180	63.14%	21,985.39	3,478,478	4,472,830	15,533.04	41,631.67	30,748.77	\$ 44	10,028.02	31,461,195.56
Northwest	6,332	2,221,657	8,101,393	27.42%	90,972.13	14,883,404	99,170,117	138,455.93	234,844.10	284,564.66	\$ 67	50,075.28 (red)	2,471,018.77
Pennsylvania-Central	7,788	1,371,629	3,397,487	40.37%	52,880.49	5,808,249	16,444,219	38,758.07	124,146.99	173,076.89	\$ 70	52,076.89 (red)	2,058,678.99
TWA	13,088	6,196,662	14,659,259	42.27%	309,845.44	47,373,374	253,062,690	180,736.34	510,760.91	684,539.79	\$ 72	179,933.52 (red)	6,605,960.04
United	19,052	9,368,695	18,700,047	50.08%	472,240.52	131,939,095	413,787,777	290,938.15	814,749.94	800,440.88	\$ 56	21,897.63	14,034,550.05
Western Air Express	2,229	758,840	1,992,694	37.98%	35,488.24	13,241,247	34,647,306	61,275.56	101,747.22	104,584.98	\$ 62	2,422.52 (red)	1,004,961.17
Wilmington-Catalina	619	18,570	40,320	46.10%	3,125.00	213,730			3,237.93	8,304.03	\$ 1.88	8,065.33 (red)	140,798.71

^a All monthly reports to the CAA are subject to revision and year-end adjustment.^b Total operating expenses divided by total plane miles; computed to the nearest half-cent.

Five Years of Domestic Air Progress

Statistics Compiled by the Civil Aeronautics Authority for Domestic Air Carriers—1935-1939 Inclusive



STOCK COMMENTS

By Philip P. Friedlander

It was the aviation group that brought to life once again one of Wall Street's oldest adages that stocks should be sold on good news. For it was just when the announcement was made that the long-delayed and much-discussed war plane orders from the Allied nations had been given, in part, to our major manufacturing companies, that these equities celebrated but momentarily, flaring up and then fizzling out like a Roman candle to start a downward journey. Such market behavior clearly deserves more detailed explanation.

The averages had broken through the resisting zone of 46 on volume, ascending to 50.32 close to 51, the first objective named. The move up was sharp and took place just a few days before the British buying mission had announced the consummation of their several months' work. While technically the action was entirely within the scope of good market behavior there may be several implications that cannot be denied. Undoubtedly the long side in this group was fairly well crowded and traders and investors recognizing this fact sought to cash in on their sizable profits.

Stories are creeping into Wall Street that the task of the manufacturing companies of changing over to mass production is a major one and technical difficulties are being encountered. The Street hears of several companies being penalized on failure to deliver on time according to specifications, due, undoubtedly, to failures of auxiliary companies to deliver necessary parts and equipment to complete orders. It is always during the transitional stage, where factories must be enlarged and new plants opened, that the problems of production are accentuated.

It is so often that prices of securities flash out their warning. It may be that this group now is cautioning against the most optimistic predictions. The statements of the first and second quarters of this year cannot help but be good, but the fantastic prophecies will fall short. It will be later in the year that things

CYCLONE GETS TC

CAA Approves Wright's G-200 for Airline Use; C & S Will Make First Installation

Type Certificate No. 219 has been granted by the CAA to Wright Aeronautical Corp.'s G-200 Cyclone (GR-1820C-202A) for airline use of the 1,200-hp., nine-cylinder engine which weighs slightly more than one pound for each horse power it develops.

The following are selected data on the engine: Type—9RA-3.2 reduction gears. Rating—1,000 hp. at 2,300rpm. at 6,900 ft. Takeoff, 54.5-in. Hg. 2,500 rpm., 1,200rpm. Fuel—90. Bore and stroke—6½ x 7½. Displacement—1,523 cu. in. Compression ratio—6.7:1. Dry weight—1,310 lbs. Propeller shaft—SAE No. 50. Supercharging—7-1 gear ratio. Incorporates a dynamic damper on both front and rear counterweights tuned to the 4½ order.

Arthur Nutt, Wright's vice-president—engineering, revealed that the engine has been installed in a number of military planes but that the first commercial application of the powerplant is being made in the fleet of Douglas DC-3's being placed in service on May 1 by Chicago & Southern Air Lines.

Piper Aircraft Corp.

Lock Haven, Pa.—Official 1939 production figures reveal a total of 1,806 Cubs manufactured; delivered, 1,778. Figures constitute an increase of nearly two and one-half times the '38 production when 737 planes were built and sold. Starting from approximately 300 employees in Jan. 1939, working force of the company was gradually increased during the year until 525 were employed on Jan. 1, 1940.

will be running more smoothly and the real big earnings will not show up until that time.

What then are charts showing for this group? The first objective has been reached. Two other points are indicated, 54 and then 57. This is the stage where the nimble trader can make a profit by determining the upper and lower limits of a trading range in a lining movement. Definite points will be established where stocks can be sold and, at a later time be repurchased. On the average chart this should be established between 47 and 51.

GOVERNMENT CONTRACTS

(Awards of \$10,000 and Over)

Release Date Shown

ENGINES, PARTS, ACCESSORIES

Vought-Sikorsky Aircraft Div., United Aircraft Corp., Stratford, Conn., 4/5, parts for airplanes, \$15,565.14 (Navy).
Aero Spark Plug Co., New York, N. Y., 4/9, spark plugs, \$44,251.20 (Air Corps).
Champion Spark Plug Co., Toledo, O., 4/9, spark plugs, \$55,431.10 (Air Corps).
Hamilton Standard Propellers Div., United Aircraft Corp., E. Hartford, Conn., 4/10, blades and hubs for airplanes, \$52,110.36 (Navy).
Wright Aeronautical Corp., Paterson, N. J., 4/11, aircraft turbine and compressor engine, \$28,412.50 (Navy Supplies & Accounts).
General Electric Co., Schenectady, N. Y., 4/12, maintenance parts for superchargers, \$70,604.93 (Air Corps).
Wright Aeronautical Corp., Paterson, N. J., 4/12, maintenance parts for Wright engines, \$318,008.47 (Air Corps).
Douglas Aircraft Co. Inc., Santa Monica, Cal., 4/12, aircraft equipment, \$115,000 (Air Corps).
Northrop Aircraft Inc., Hawthorne, Cal., 4/18, single spar wing panels, \$17,640 (Air Corps).
Bellanca Aircraft Corp., New Castle, Del., 4/18, single spar wing panels, \$18,495 (Air Corps).
Hartzell Propeller Co., Piqua, O., 4/18, propeller blades, \$20,700 (Navy).
Goodyear Aircraft Corp., Akron, O., 4/18, envelope and accessories assemblies, \$34,500 (Air Corps).

MISCELLANEOUS

Taller & Cooper, Jersey City, N. J., 4/5, six-component balance for Wright Field wind tunnel, \$166,042.40 (Air Corps).
Emil Brown & Co., Los Angeles, Cal., 4/6, kitchen and refrigerating equipment, Naval Air Station, Alameda, Cal., \$53,947.52 (Yards and Docks).
Truscon Steel Co., New York, N. Y., 4/6, hangar doors, \$26,185.50 (WPA).
Lodge & Shipley Machine Tool Co., Cincinnati, O., 4/6, lathes, \$12,818 (NACA).
Harold E. Trent Co., Philadelphia, Pa., 4/6, electric furnaces, \$16,097 (Air Corps).
Elwell-Parker Electric Co., Cleveland, O., 4/6, electric trucks, \$22,660 (Air Corps).
Automatic Transportation Co. Div., Yale & Towne Mfg. Co., Chicago, Ill., 4/6, electric trucks, \$19,450 (Air Corps).
Crescent Truck Co., Lebanon, Pa., 4/6, electric trucks, \$11,620 (Air Corps).
Mercury Mfg. Co., Chicago, Ill., 4/6, electric trucks, \$11,660 (Air Corps).
Breeze Corps, Inc., Newark, N. J., 4/11, doors, hatches and scuttles, \$85,564 (Navy Supplies and Accounts).
Snap-On Tools Corp., Kenosha, Wis., 4/12, socket wrench handles, torque indicating, \$15,915.46 (Air Corps).
Star Pattern Works, Dayton, O., 4/12, dryer and printer assemblies, \$14,597.76 (Air Corps).
Horton Mfg. Co., Bristol, Conn., 4/12, parachute suspension line silk cord, \$41,029.40 (Navy).
Clark Tractor Co. Div., Clark Equipment Co., Battle Creek, Mich., 4/12, heavy and light duty tractors and mowers, \$179,561.80 (Air Corps).
Allis-Chalmers Mfg. Co., Milwaukee, Wis., 4/12, heavy and light duty tractors and mowers, \$18,759.96 (Air Corps).
Associated Piping Co., Los Angeles, Cal., 4/12, construction of fueling system, Chanute Field, Ill., \$44,894 (War).
Walker & Olund, Honolulu, T. H., 4/12, construction and completion of service club building, Hickman Field, T. H., \$57,535 (War).
Walker & Olund, Honolulu, T. H., 4/12, construction of equipment repair building, Hickman Field, T. H., \$173,135 (War).
Associated Piping Co., Los Angeles, Cal., 4/12, construction of extension to fueling system, Hickman Field, T. H., \$126,630 (War).
Joslin & Cory Inc., San Francisco, Cal., 4/12, advanced purchase of power plant equipment, Ladd Field, Alaska, \$273,785 (War).
Flotations Systems Inc., Los Angeles, Cal., 4/12, fueling system, McChord Field, Wash., \$44,470 (War).
Manhattan Construction Co., Muskogee, Okla., 4/12, construction of warehouse, Lowry Field, Colo., \$72,700 (War).
Peter Searle, Denver, Colo., 4/12, steam distribution system, Lowry Field, Colo., \$109,955 (War).
Aqua Systems Inc., New York, N. Y., 4/12, construction and completion of fueling system, Wheeler Field, T. H., \$100,368 (War).
Finke Engineering Co., Dayton, O., 4/12, ramp to building, equipment foundation and basement floor in dynamometer buildings, Wright Field, O., \$23,653 (War).
Fleetwings Inc., Bristol, Pa., 4/12, communication trailers, \$88,125 (War).
Western Gear Works, Seattle, Wash., 4/12, machinery, boat and airplane crane, \$282,000 (Navy Supplies and Accounts).
Northern Pump Co., Minneapolis, Minn., 4/13, hydraulic pumps, \$50,406 (Navy).
Lite Mfg. Co., New York, N. Y., 4/13, pilot's safety belts, \$14,808 (Navy Supplies and Accounts).
Teletype Corp., Chicago, Ill., 4/13, teletype machines, \$36,370.84 (CAA).
Magnaflex Corp., Chicago, Ill., 4/16, magnetic inspection equipment, \$70,568.87 (Air Corps).
Lite Mfg. Co., New York, N. Y., 4/18, flyer's clothing bag assembly, \$37,760 (Air Corps).
Selfreast-Eistad Machinery Co., Dayton, O., 4/11, milling machines, \$43,860.50 (Air Corps).
Cincinnati Milling Machine & Cincinnati Grinders Inc., Cincinnati, O., 4/11, milling machines, \$36,109 (Air Corps).

NEW YORK STOCK EXCHANGE

Week Ended Apr. 13

	High	Low	Net Change	Sales
American Airlines	74	64½	+5	21,700
Aviation Corp.	8	7½	+½	70,700
Bendix Aviation	36½	34	+½	26,200
Boeing Airplane	28	26	+½	36,800
Consolidated Aircraft	31	28½	+½	12,500
Continental Motors	41½	39½	+½	27,500
Curtiss-Wright	107½	104½	+½	122,500
Curtiss-Wright A	297½	283½	+½	42,700
Douglas Aircraft	89½	85½	+½	15,500
Eastern Air Lines	42	37½	+½	16,800
Ex-Cell-O	29½	27½	+½	8,600
Lockheed Aircraft	40	37½	+½	105,000
Glenn L. Martin	46¾	44½	+½	23,900
Natl. Aviation Corp.	15¾	14½	+½	13,800
N. American Aviation	26¼	24	+½	48,400
Pan American Airways	24½	21½	+½	57,800
Sperry Corp.	46½	44	+½	8,100
Thompson Products	367½	349½	+½	5,000
TWA	21¾	19½	+½	20,900
United Aircraft	507½	48½	+½	24,700
United Air Lines	23½	20½	+½	76,600
Wright Aeronautical	129	125	+½	370

Week Ended Apr. 20

	High	Low	Net Change	Sales
American Airlines	75	68	+½	19,100
Aviation Corp.	8½	7¾	+½	105,100
Bendix Aviation	36½	32¾	+½	26,800
Boeing Airplane	28½	24½	+½	40,400
Consolidated Aircraft	31½	28½	+½	23,000
Continental Motors	41½	39½	+½	37,600
Curtiss-Wright	111½	104	+½	166,100
Curtiss-Wright A	301½	283½	+½	27,400
Douglas Aircraft	94½	87	+½	32,600
Eastern Air Lines	44½	38½	+½	30,800
Ex-Cell-O	31¾	29½	+½	11,100
Lockheed Aircraft	41¾	37½	+½	111,600
Glenn L. Martin	47¾	43	+½	40,300
Natl. Aviation Corp.	16¼	14½	+½	28,400
N. American Aviation	25½	23	+½	47,800
Pan American Airways	24½	21½	+½	48,600
Sperry Corp.	45¾	42½	+½	12,100
Thompson Products	38¼	35¾	+½	14,300
TWA	21¾	19½	+½	16,100
United Aircraft	53¾	48½	+½	62,100
United Air Lines	23¾	20½	+½	73,000
Wright Aeronautical	128	124	+½	140

NEW YORK CURB EXCHANGE

Week Ended Apr. 13

	High	Low	Net Change	Sales
Aero Supply A	5½	5½	+½	3,600
Aero Supply B	13¾	13	+½	1,300
Air Associates	3¼	3	+½	3,200
Air Investors	29¾	29¾	+½	100
Air Investors cv pf	110	9 16	+½	2,400
Air Investors war	41½	41½	+½	51,200
Aviation & Transp.	7¾	7	+½	6,200
Beech Aircraft	31¾	28½	+½	16,800
Bell Aircraft	7	6½	+½	3,100
Bellanca Aircraft	61½	59½	+½	3,500
Breeze Corps	17¼	15½	+½	28,200
Brewster Aero	9¾	8½	+½	23,200
Canadian Colonial	11	10¼	+½	2,400
Fairchild Aviation	5¾	5¼	+½	27,400
Fairchild Eng. & Air	23¾	20¾	+½	38,500
Grumman Aircraft Eng.	16¼	15½	+½	700
Irving Air Chute	21½	18½	+½	50,100
Penn-Central Airlines	67½	61½	+½	200
Republic Aviation	27½	25½	+½	1,300
Roosevelt Field	61½	51½	+½	5,000
Waco Aircraft	7½	6¾	+½	4,100
Western Air Express	7½	7	+½	5,000

CONGRATULATIONS TO PCA!

— on their thirteenth anniversary. We're proud that Western Electric 27 Type and 14 Type Receivers were selected for Pennsylvania—Central's new Capital Fleet of Douglas DC3's.

Western Electric
AIRCRAFT RADIO SYSTEMS

Financial Reports

For Calendar 1939 Unless Otherwise Specified

AVIATION CORPORATION

Consolidated net loss \$2,238,049, year ended Nov. 30, compares with \$187,909 profit in 1938. Net sales \$3,301,778.75 (\$6,373,762 in 1938). Cost of sales (excluding depreciation, amortization and taxes aggregating \$275,767) \$3,223,960.78. Other income \$248,224.07. Expenses \$1,967,758 (general and administrative \$679,626; selling and advertising \$447,125; engineering and experimental \$392,645; taxes other than income \$178,362). Other deductions \$20,381. Depreciation and amortization of fixed and intangible assets \$245,907. Extraordinary items: write-off of deferred engineering and experimental expenses, etc. \$164,902, net loss on sales of securities \$80,813, provision for Federal income tax (from sale of net assets of Vultee Aircraft Div. for stock in Vultee Aircraft, Inc.) \$54,326.

Balance sheet: Assets \$12,100,637. Current assets \$3,667,202 (cash \$1,789,652; marketable securities at cost \$124,660 having quoted value \$162,995; notes and accounts receivable \$357,567; due from Vultee Aircraft, Inc. \$65,780; accrued interest receivable \$63,697; inventories valued at cost less provision for obsolescence \$1,285,845, includes materials, part and supplies \$659,536, work in process \$395,149, finished product \$241,158). Investments \$5,417,633 (American Airlines, Inc.—\$294,300 principal amount 5-year 4½% cost—convertible due July 1, 1941 at cost—convertible \$242,112 having indicated market value of \$7,024,126 when converted into common stock, non-convertible paid in full in Dec. 1939 \$872,187; Vultee Aircraft, Inc.—450,000 shares of capital stock \$1-373.319; sundry aeronautical securities at values determined by directors at Dec. 31, 1932 with subsequent additions at cost \$721,235 including Pan American Airways Corp. 135,194 shares common \$691,235 having market quotation \$1,909,615, and Roosevelt Field, Inc. 60,000 shares common \$30,000 having market quotation \$105,000; sundry unlisted securities at cost or nominal values \$28,779). Fixed assets at cost \$1,682,816 (land \$55,400; buildings and improvements \$323,188, machinery and equipment \$1,610,900, office furniture and equipment \$42,741 equals \$1,976,831 less reserves for depreciation \$597,558; patterns, dies and jigs less amortization \$182,731; construction work in progress \$65,412). Property and equipment leased to others at values determined by directors at Dec. 31, 1932 \$339,028. Prepaid taxes, insurance, etc. \$39,437. Deferred engineering and experimental expenses \$608,500, includes \$513,494 applicable to new products under development. Patents and licenses at cost less amortization \$50,882. Trade name \$25,000.

Current liabilities \$583,455 (accounts payable \$316,248; accrued taxes including income taxes \$112,100; sundry accrued expenses \$77,804; customers' deposits \$34,701; purchase money obligation \$42,600). Reserves against properties and contingencies \$28,991. Capital stock: (authorized 5,000,000 \$1-par) issued 3,962,958, less held in treasury \$3,291; outstanding 3,969,667. Surplus: capital \$4,650,324; earned \$5,191,114 (deficit).

Unfilled orders for Stinson Aircraft Div. and Lymcoming Div. on Mar. 1, 1940, totaled \$4,464,000 (\$419,000 Mar. 1, 1939). Vultee Aircraft, Inc. unfilled orders were \$14,960,000 as of Mar. 1, 1940 against \$915,000 year previous. Statement includes balance sheet of:

VULTEE AIRCRAFT, INC.
Assets \$2,500,420. Current assets \$1,018,557 (cash \$345,437; accounts receivable \$43,984; inventories valued at lower of cost or market \$569,983, including materials, parts and supplies \$285,771, work in process \$184,211, finished product—demonstration planes \$100,000; advance payments on inventory purchase commitments \$59,152). Fixed assets at predecessor's cost plus subsequent additions at cost \$678,432, including: land \$229,500; buildings and improvements \$28,517 after depreciation of \$9,718; machinery and equipment \$191,662 after depreciation of \$142,444; office furniture and equipment \$24,504 after depreciation of \$5,325; patterns, dies, jigs, etc. less amortization \$111,721; construction work in progress \$92,503. Prepaid taxes, insurance, etc. \$39,802. Deferred engineering and experimental expenses \$760,928 of which \$311,183 is applicable to new models for which no production orders had been received to Feb. 15, 1940. License agreement less amortization \$2,699.

Current liabilities: \$1,190,958 (accounts payable \$295,589; due Aviation Mfg. Corp. \$65,780; accrued taxes \$43,020; sundry accrued expenses \$108,633; customers' deposits \$672,884). Capital stock: (authorized 1,000,000 \$1-par shares) issued and outstanding 450,000 shares. Surplus: paid-in \$923,319; earned \$859,461 (deficit).

Pro forma balance sheet as of Nov. 30, 1939 shows: assets \$5,018,920. Current assets \$3,537,057 (cash \$2,863,937). Capital stock issued and outstanding 750,000 \$1-par shares. Surplus: paid-in \$3,141,819; earned \$3,077,961.

PENNSYLVANIA-CENTRAL AIRLINES CORP.

Net profit \$53,318 (20c) against loss of \$20,868 in 1938. Operating revenues, \$1,857,493; passengers \$1,262,453; mail \$535,104; express \$42,298; other \$17,636. Operating expenses (before depreciation) \$1,550,993; transportation \$1,027,298; maintenance and repairs \$250,067; selling and advertising \$142,518; general and administrative \$93,930; taxes, other than fuel and Federal income \$37,178. Depreciation \$165,166. Operating income \$141,533. Misc. other income \$641. Misc. deductions \$8,851. Income before extraordinary charges and Federal income tax \$138,892. Extraordinary charges \$73,424 (new route surveys \$26,328; expenses of acquiring and preparing new Douglas \$27,400; hearings on air mail rate case \$19,695). Net income before \$12,150 provision for Federal income taxes \$65,468.

Total assets \$2,010,255; current assets \$693,704 (cash \$333,493; receivable from U. S. government \$104,604, from traffic and agents \$104,248, miscellaneous receivables \$55,229, receivable from employees \$11,132; inventories, gasoline and oil \$15,318, replacement parts-supplies \$49,677). Property and equipment items: Aircraft, less depreciation, \$910,642; ground equipment and improvements \$72,911; construction in progress \$35,092. Sundry investments \$285. Prepaid expenses \$58,746. Going concern value of predecessor companies, reflected to extent of excess of liabilities assumed and aggregate par value of stock issued, over tangible assets taken over as at Nov. 1, 1936, \$238,872.

Current liabilities \$481,885 (Bank and other notes payable \$140,760; accounts payable \$224,473; accrued liabilities \$81,085; provision for engine overhaul \$10,942; deposits on travel cards \$24,623). Bank notes payable less installments due within year and included in current liabilities \$648,000. Reserve for possible liabilities of predecessors \$5,818. Capital: Of 300,000 \$1-par shares authorized, 262,000 outstanding. Capital surplus \$763,614. Operating deficit, balance at Dec. 31, \$151,064.

Prospect: "Company's new equipment affords greater revenue potentialities—and although operating costs will be higher, additional seats available should result in additional revenues substantially above such increased costs."

UNITED AIR LINES TRANSPORT CORP.

Net profit \$322,121 (21.5c) compares with loss of \$997,221 in 1938. Revenues: Passengers \$7,621,800; mail \$3,702,071; express \$497,866; miscellaneous \$465,635; total operating, \$12,287,374. Other-than-operating income \$33,028. Expenses: operating \$8,427,452; maintenance \$1,345,289; depreciation of equipment less salvage on equipment sold \$1,553,996; taxes on gasoline and oil \$234,776, unemployment and old age \$203,109, property-franchise-misc. \$102,655. Federal income \$131,000. Total operating expenses and taxes \$11,998,281. Net income from operations \$289,092.

Balance Sheet: Assets \$14,250,748. Current assets \$7,834,383 (including cash in banks \$3,860,655; working funds \$77,213; U. S. Treasury notes \$1,552,109; accounts receivable, from Post Office \$721,313, from other lines and agencies \$995,075, installment tuitions at Boeing School of Aeronautics \$202,592; inventories \$455,424). Investments \$608,614 (including \$431,266 due from and withheld by Post Office on mail contracts annulled in 1934 and subsequent receivables of \$62,741 in controversy). Deferred charges \$268,892, including prepaid rents, insurance, etc., of \$185,292. Real property and equipment used in operations \$5,538,857, including real estate of \$2,337,562, flying equipment \$2,416,998, and other equipment \$784,296.

Air-Minded Germany

By official decree all German schools must now include compulsory instruction in aviation. Purpose of the decree is to guarantee the largest possible number of recruits suitable for training as crew members of the German military and commercial air fleets. For some years there has been a voluntary program of aviation instruction available.

Current liabilities: \$2,316,343, including accounts payable for purchases \$404,438; due other lines for transportation \$586,867; deposits received for travel cards less transportation purchased by holders \$397,087; accrued salaries, wages, etc. \$343,155; accrued taxes \$224,850; advance tuitions paid by students \$237,861; transportation bought but unused \$122,082. Capital stock: of 2,000,000 authorized \$5-par shares, outstanding are 1,500,451 (\$7,502,255). Surplus: \$6,373,378; earned (deficit) \$1,941,228.

Other statistics: revenue plane miles 17,637,068; revenue passenger miles 148,954,288; mail pound-miles 5,401,910,824; express pound-miles 1,789,125,263; passenger load factor 61.0%; average number of passengers carried per airplane-mile 8.45; average revenue per passenger mile 5.07c; average revenue per mail ton-mile \$1.37.

RYAN AERONAUTICAL CO.

Net income \$90,728 (consolidated), with gross sales \$845,856; gross profit from trading and manufacturing \$109,316; gross profit from all operations \$215,269. Operating revenues: tuitions and flying revenue \$203,536; dormitory revenue and rentals \$17,301; commissions earned \$349, less operating expenses of \$115,235. Expenses \$116,052 (engineering and development \$11,233; selling \$28,513; general and administrative \$65,643; taxes other than income and social security \$9258; interest \$1402. Net operating profit \$99,216. Other income \$14,524. Provision for Federal income taxes \$23,011.

Consolidated balance sheet: Assets \$1,200,159. Current assets \$648,454 (including cash \$27,933; trade accounts receivable \$225,296; inventories \$392,917, including raw materials \$78,260, manufacturing work in process \$197,660, contract work in process \$114,159). Investments \$600. Depreciated fixed assets \$459,315. Intangible assets \$50,623; current development costs \$10,434; patent fees and applications \$316; army observation plane \$23,620; total less amortization reserve of \$27,826. Deferred charges \$34,621.

Current liabilities \$356,158 (notes payable \$15,000, trade accounts payable \$68,297, customers' deposits \$197,585, Federal and state taxes payable \$44,192, salaries payable \$27,754, accrued expenses \$329. Long term liabilities (mortgages) \$20,317. Deferred income (unearned tuitions) \$57,300. Capital stock: Authorized 500,000 shares \$1-par; issued and outstanding 375,000; premium on capital stock \$277,529. Earned surplus \$113,845. Backlog at Feb. 14, 1940, \$1,679,433, against \$300,000 Jan. 1, 1939, and \$1,500,000 at Jan. 1, 1940 (consolidated figures include Ryan School of Aeronautics).

TRANS-CANADA AIR LINES

Deficit of \$411,656 against \$488,941 appropriated by the Dominion parliament.

Income: Passenger \$643,915; mail \$1,632,873; express \$23,613; excess baggage \$3,940; other transportation \$13,347; incidental \$32,784, for total revenue \$2,350,473. Operating expenses: aircraft operation-maintenance \$1,724,153; ground operation-maintenance \$636,256; incidental services \$20,537; traffic and general administration \$195,031; general taxes \$10,763, for total expenses \$2,586,743. Net operating loss \$236,269. Interest on capital invested \$175,904.

Traffic: route miles operated 3,664; revenue miles 2,780,000; revenue passengers 21,569; passenger load factor 56.1%; average passenger journey 559 miles; mail, 523,906 pounds; express, 45,819 pounds; excess baggage, 2,910 pounds; revenue hours flown 17,403.

Balance sheet: Assets \$4,157,734; current assets \$1,054,628 (cash \$258,734; accounts receivable \$451,468; traffic balances receivable \$53,226; materials and supplies \$231,139). Deferred debits \$37,457. Capital assets after \$634,241 accrued depreciation \$3,065,647. Current liabilities \$258,357 (accounts payable \$6,558; salaries and wages \$24,274). Deferred credits \$13,537. Self insurance reserve \$117,339. Capital stock: common subscribed, par value, \$5,000,000, less uncalled subscriptions of \$1,250,000. At Dec. 31 company owned 15 Lock-

Milwaukee Seeks Plane Mfrs.

Recent effort to attract airplane manufacturing and testing interests to Milwaukee, Wis., was the trip to the west coast of Alvin J. Monroe of the Milwaukee Association of Commerce. Visiting Douglas Aircraft Co., Ryan Aeronautical Co., Consolidated Aircraft Corp., Vultee Aircraft Inc., North American Aviation Inc., and Kinner Aircraft & Motor, Monroe stressed the strategic value of Milwaukee's inland site and assured the manufacturers that the mid-west city had an adequate supply of all types of metal trade workers, including airplane and propeller mechanics.

Dumore Distributes Brochure

Dumore Co., Racine, Wis., is distributing its 12-page advertising brochure dedicated to the aviation industry. The booklet illustrates planes and applications of Dumore fractional horsepower universal motors in connection with them. The motors are used for cowl flaps, adjustable landing gears, de-icers, wing flaps, etc.

heed 14H craft, with Pratt and Whitney SIEG or SIEG Hornet engine (850 hp.), Hamilton Standard Hydromatic full-feathering propellers. Personnel was 497, up 165 from a year previous.

AERONAUTICAL SECURITIES, INC.

Net profit for quarter ended Mar. 31, \$2919. Net assets were equal to \$102.10 a share, against \$9.20 a share on Dec. 31, 1939, and \$7.21 on Mar. 31, 1939. Total assets \$99,416 including cash \$76,886; investments at market \$79,052. Capital stock: Of 300,000 \$1-par shares authorized, 87,313 shares are issued, including 3849 sold of which 3839 have since been paid for (less 573 held in treasury) \$86,556. Surplus per book on basis of carrying investments at cost \$618,827, plus \$179,951 unrealized net appreciation of investments exclusive of provision for costs of realization.

BREWSTER AERONAUTICAL CORP.

Net income \$9976 (2c each on 446,623 shares) against \$233,878 in 1939 (66c). Backlog at Dec. 31, \$10,175,151; at Feb. 29, 1940, \$17,856,498.

CANADIAN COLONIAL AIRWAYS, LTD.

Net income \$16,175, company's first profit, according to Archie E. Low, president. (Details will appear when other figures are released).

CANADIAN COLONIAL AIRWAYS, INC.

Net loss \$1252 on 199,999 \$1-par shares. Total assets \$497,803, current assets \$110,742, current liabilities \$354,880. Capital surplus \$3,000 & deficit from operations \$70,177. Canadian Colonial Airways, Ltd. (Canada), is not consolidated since 51% of company's stock was sold in October 1939.

BRANIFF AIRWAYS, INC.

Company reports to AMERICAN AVIATION that its balance sheet of Feb. 29, giving effect as of that date to subsequent financing, reveals company has paid off its indebtedness to Douglas Aircraft Co., Inc., and Chase National Bank, incurred in connection with purchase of a DC-3 aircraft. The single long-term debt item (\$3621) was to be eliminated by May 1.

WARNER AIRCRAFT CORP.

Net loss \$21,501, against profit of \$8407 in 1938. Details will appear upon receipt of complete data.

THOMPSON PRODUCTS, INC.

Company announced Apr. 11 redemption of 550 shares of \$5-convertible prior preference stock at \$105 a share, plus accrued dividends.

CONTINENTAL MOTORS CORP.

Net profit for quarter ended Jan. 31, \$94,875 before Federal taxes, against net loss of \$141,664 for corresponding 1939 period. Backlog at Mar. 8 was \$179,000, against \$2,903,450 a year previous.

SPERRY CORP.

Net profit \$5,462,061 (\$2.71 each on 2,015,565 \$1-par shares) for company and wholly-owned subsidiaries, against \$4,961,398 in 1938, including \$162,044 profit on sale of securities, or \$2.46 each on 2,015,565 shares. Total assets \$2,350,938; current assets \$1,854,193 (cash \$4,711,780); current liabilities \$9,751,197. Gross income from operations \$11,090,659; operating income \$7,755,288; total income \$7,943,294.

FLEET AIRCRAFT, LTD.

Net loss \$22,798 against 1938 profit of \$66,742. Present backlog is \$5,000,000. Balance sheet shows current assets \$1,101,497; current liabilities \$527,364, indicating net working capital of \$274,133 against working capital of \$367,289 year previous. Bank loans at Dec. 31, 1939, were \$681,605.

Washington Financial Review

Summaries of SEC & RFC Data Filed Through Apr. 17

PROSPECTUS FILINGS

CHICAGO & SOUTHERN AIR LINES INC.

Prospectus covers 76,176 no-par common shares (68,176 of which were registered with the SEC in 1936; remaining 2,000 not being registered), portion of which will be sold at initial public offering price of \$6.50 by Stern, Wampler & Co. Inc., Chicago, and I. M. Simon & Co., St. Louis. Ninety days after acquiring 8,000 shares from certain stockholders at \$5, underwriters may terminate agreement, or may purchase outstanding convertible preference stock and convert to common for public sale. Present ratio is two shares common for each share preferred. Latest report shows outstanding 34,088 convertible preference shares of \$10 par and 100,100 no par common shares.

TRANSCONTINENTAL & WESTERN AIR INC.

Prospectus revised Mar. 28, originally issued Dec. 17, 1936, has been filed with the Commission for a maximum of 50,000 \$5-par capital shares for offering under company's employee purchase plan at \$7 before May 1. The original registration statement involved 257,711 shares. Proceeds will be used for working capital. The company states that E. A. Pierce & Co. at Feb. 19 owned of record 139,651 shares (16.8%) and Hughes Tool Co. owned beneficially 170,000 shares (20.57%). Company has agreed to sell latter firm 119,154 authorized, unissued shares at \$14. At Feb. 29 there were 530,846 shares outstanding of an authorized million shares.

CURRENT REPORTS

MENASCO MANUFACTURING CO.

Reports that 891,262 \$1-par shares were outstanding at Mar. 31, total of 223,477 shares having been issued in February and March, mainly by exercise of warrants, although 11,994 were issued to creditors in cancellation of indebtedness at rate of \$1.50 per share. Sutro & Co. will receive \$10,000 for underwriting expenses and services. As of Mar. 31 proceeds had been expended as follows: payroll \$38,386; payment to North Hill Co. Inc., under note \$12,174; accounts payable \$119,646; advance sales commissions on contract received \$10,000; payment on notes \$140,000.

HAYES MANUFACTURING CORP.

A. W. Porter Inc., New York, will purchase subject to agreement, 50,000 shares of authorized, unissued \$2-par common stock at \$2.50, to be taken down and paid for within 60 days from the date upon which 275,000 shares shall have been registered with SEC and from date of receipt of authority for listing (upon notice of issuance) on New York Stock Exchange. Public sales will be at market. (Approximate proceeds are set at \$761,360, for plant and equipment.)

AMERICAN EXPORT LINES INC.

The company, parent of American Export Airlines Inc., announces agency agreement with Lehman Bros. whereby latter is appointed agent to effect private sale of 10,000 shares of 5% cumulative preferred stock, \$100-par, of parent, and non-detachable capital stock purchase warrants of the airlines subsidiary, providing at least 7,000 such shares are sold, and providing airlines receives authorization from CAA for a passenger-property-mail service between at least one U. S. point and one European point. At Mar. 31 subscriptions for aggregate of 7,250 preferred shares, with warrants attached, had been confirmed. For their services, Lehman Bros. will receive, upon delivery of stock, a fee equal to 5% of the aggregate par value of the preferred sold.

Parent has agreed to purchase initially shares of airlines stock at \$3, and at rate of 33 1-3 shares of capital stock for each share of preferred. Parent will advance the net proceeds from sale of preferred, with warrants attached, to airlines on open account, and airlines will assume all expenses and commissions. Further, if airlines sells \$100,000 additional amount of its stock parent will convert the indebtedness of airlines into capital stock of airlines at a price per share equal to the average of the net sales prices per share received in such shares.

Latest report shows parent owns 336,000 shares of airlines, of 480,000 50c-par shares outstanding.

BENDIX AVIATION CORP.

The following companies have ceased to be subsidiaries: Airplane Parts & Supplies Inc., Bendix Brake Co. of Michigan and Pacific Airmotive Corp. Ltd.

SQUARE D CO.

Company has withdrawn objection to public disclosure of items in profit and loss statement of Kollsman Instrument Co. Inc., for years ended Dec. 31, 1937, and 1938, and for 10 months ended Oct. 31, 1939. Ten months figures: Sales (less returns, etc.) \$1,906,696; inventory at beginning of period \$327,650; purchases (net) and manufacturing expenses \$384,844; inventory at close of period \$489,148; gross profit on sales \$467,258. Operating profit \$257,682; net profit after provision for federal taxes \$219,547.

REARWIN AIRCRAFT & ENGINES INC.

At Mar. 23 total of 1,430 shares of company's stock had been sold for aggregate proceeds of \$4,647, netting \$3,575. Contract with Hatch, Piper & Co. Inc. and Tobey & Co., underwriters, dated May 23, 1939, expired Mar. 23. Sales of company were up 73% from 1939 period, to \$58,234. Apr. 1 backlog: \$60,955.

PAN AMERICAN AIRWAYS CORP.

Company has recently filed agreement of June 20, 1935, between PAA Corp., PAA Inc., Matson Navigation Co. and Inter-Island Steam Navigation Co. Ltd. (Hawaii) calling for joint agency services. In event of joint notice (not yet served) by Matson & Inter-Island, prior to June 20, 1941, PAA will subscribe for half of the stock of a new airline company to ply between U. S. Pacific Coast and Hawaii, such 50% not exceeding \$750,000, and a like amount will be subscribed for jointly by Matson & Inter-Island.

After such organization, PAA will operate in the territory only through flights destined for or originating from points beyond Hawaii, and will not use larger aircraft on this segment than elsewhere on the Pacific routes. Provisions also are made for transfer to the joint company of contracts for carriage of mail for all flights between the Pacific Coast and Hawaii which are terminated at Hawaii. The new company also will receive from PAA any mail differential paid PAA by the government for service in this area as part of through flights, over rates paid by the government on local flights.

The agreement, filed confidentially with the CAA in Oct. 1938, has not been acted upon. It is also revealed that Matson on Aug. 25, 1936, purchased 13,750 shares of PAA Corp. \$10-par capital stock, with net proceeds to PAA of \$508,750. Sale was pursuant to an option on said number of shares exercisable by Matson, as part of an agreement with Matson and Inter-Island for purchase of 27,500 PAA shares. The remaining 13,750 shares were exercisable by Inter-Island at \$37 a share.

EASTERN AIR LINES INC.

Company has increased authorization from 500,000 \$1-par shares to 1,000,000 shares. A goodwill item of \$299,997 acquired at Apr. 22, 1938, from Eastern Air Lines Division of North American Aviation Inc. has been written off with corresponding charge against capital surplus.

BEECH AIRCRAFT CORP.

At Mar. 31 there were 400,000 \$1-par shares outstanding after issuance during the month of 8254 shares with aggregate net proceeds of \$49,887.

REPUBLIC AVIATION CORP.

At Mar. 30 there were outstanding 150 shares of convertible first preferred, series A, stock, after conversion of 2,428 shares into 15,817.5 shares of \$1-par common.

AIR INVESTORS INC.

In March firm acquired 7,832 shares of its convertible preferred stock as result of an exchange offer, 7,826 shares being acquired in exchange for capital shares of Pan American Airways Corp. in Air Investors Inc. portfolio. At Mar. 31 there were outstanding 15,768 convertible preferred shares. Amount

Douglas Constructs Building

Construction has started on a new building at Los Angeles Municipal Airport costing in excess of \$100,000 to house an assembly plant for Douglas Aircraft Co. Inc., Santa Monica, Cal. Building will be approximately 250 ft. square and is expected to be completed by September. Company will pay \$75,000 over a 15-year period for the 10-acre plot at the airport.

Fairchild Production Advances

Production of the Fairchild primary trainer, model M-62, a quantity of which is being manufactured for the Army Air Corps, is now well advanced at the Fairchild Aircraft Div. of Fairchild Engine and Airplane Corp., Hagerstown, Md., the company has announced. Air Corps designation of the plane is PT-19.

of capital represented by outstanding no-par common shares has been reduced from \$1,093,250 to \$300,000. Reduction did not change number of outstanding shares or asset value. The change created a paid-in surplus.

BRANIFF AIRWAYS INC.

Line reports if selling group is formed, members will be entitled to concession (from public offering price of \$10) of not more than 75 cents. Members of a distributing group, if formed, would be entitled to concession not exceeding \$1. Concession of not more than 25 cents from public offering price may be reallocated to other dealers. Richard Koch & Errett Dunlap Jr. will receive jointly 2½% of net underwriting profits from distribution of the entire issue of 150,000 shares. Underwriter is F. Eberstadt & Co. Inc. (Summary of Braniff issue in AMERICAN AVIATION Fortnightly Financial Review, Apr. 1).

U. S. PLYWOOD CORP.

On Jan. 18 sold entire interest (2,005 common shares) in Washington Veneer Co. for cash of \$453,900. A three-year contract whereby Plywood will have exclusive preferential right to plywood was part of the transaction.

FAIRCHILD ENGINE & AIRPLANE CORP.

Announces conversion of 971 shares of its convertible \$6-no par preferred into 33,985 common shares, leaving no convertible stock of this class outstanding.

Francis A. Galligan will serve as vice-president in charge of Fairchild Aircraft Div. under 5-year agreement from Jan. 1, 1940, subject to earlier termination by either party. Stock option is part of the transaction.

AVIATION CORPORATION

Reports Blyth & Co. Inc., and Emanuel & Co. have taken delivery of and paid for 300,000 shares of authorized, unissued shares of Vultee Aircraft Inc. for an aggregate of \$2,500,000 in cash, and Aviation Mfg. Corp. delivered to said underwriters warrants for purchase at \$10 a share by Dec. 31, 1940, of the 100,000 Vultee shares owned by Aviation Mfg. Corp. Initial price to public of the 300,000 shares was \$10.

AVIATION & TRANSPORTATION CORP.

Recently revealed that on June 23, 1939, it sold to J. Henry Schroder Banking Corp. all the outstanding shares of capital stock of Stock Transfer Corp. which were then owned by A&T, 350 shares of \$100 par.

APPLICATIONS FOR LISTING GRUMMAN AIRCRAFT ENGINEERING CORP.

Has applied for registration on notice of issuance of 25,500 shares of \$1-par common on New York Stock Exchange, and has been granted such application. (Formerly on N. Y. Curb).

ARO EQUIPMENT CORP.

7,500 shares of \$1-par common, on Chicago Stock Exchange.

TRANSCONTINENTAL & WESTERN AIR INC.

119,154 \$5-par common shares, on New York Stock Exchange.

RECONSTRUCTION FINANCE CORPORATION

HASKELITE MFG. CORP. Which had been authorized to borrow \$25,000, has withdrawn its application before disbursement.

DIVIDENDS

BENDIX AVIATION CORP. 50 cents, payable June 1, of record May 10.

Incorporations

Delaware—Central Aviation Corp.; to deal in aircraft; \$100,000, par \$100 and 2,000 shares, no par value. Gerald J. McMahon, Brooklyn, N. Y.; Mildred E. Noepel, New York City; Ralph G. Albrecht, White Plains, N. Y.

Illinois—Nor-Mann Airports Inc., 2036 S. 5th Ave., Maywood; commercial flying service and to transport freight, passengers; 100 shares no par value common. Incorporators: T. A. Cushman, C. M. Weinberg, C. E. Garrard. Correspondent: Louis Ansel, 111 W. Washington St., Chicago.

Ohio—Akron Aircraft Sales Co. of Indiana, Cleveland Heights; \$7,500. H. S. Hobson, M. B. Hobson, S. J. Cannon, H. S. Hobson, Box 5996, Cleveland.

Virginia—Eastern Air Lines Inc., a Delaware corporation, authorized to do business in Virginia. Increasing its maximum authorized capital stock from \$500,000 to \$1,000,000. F. L. Worcester, Mutual Bldg., Richmond, filed amendment.

Washington—Peninsula Airways Inc., 118 N. Lincoln St., Port Angeles; \$2,500. Filed by Stanley A. Taylor, Savings Bldg., Port Angeles. Incorporators: C. W. Bailey, Harland B. Tyler, M. F. O'Sullivan, J. C. Beltrame, Milton Ruberg and H. L. Hughes.

Bennett Corp. Gets Charter

Austin, Tex.—Bennett Aircraft Corp. of Ft. Worth has been granted its charter here with initial capitalization of \$350,000.

Curtiss Directory Issue Out

The directory issue of the "Curtiss Fly Leaf" (Vol. 23, No. 3), house organ of Curtiss Aeroplane Div. of Curtiss-Wright Corp., Buffalo, N. Y., has been distributed. Recent plant expansion is the subject of an article in the 20-page issue.

Increases Space

Aircraft Engineering Products Inc., manufacturers of hydraulic lifts for aircraft landing gear and other products, has leased the old Dundee Silk Mill at Clifton, N. J., containing 20,000 sq. ft. of space, to handle the company's increased business.

THE CHOICE OF THE AVIATION INDUSTRY

B&G SPARK PLUGS

MICA INSULATED SPARK PLUGS

Patented in the United States and other Countries

Contractors to the United States Army, Navy and Coast Guard and Aircraft Engine Builders.

THE B&G CORPORATION

136 W. 52nd Street New York

BOEING GETS ARMY \$8,000,000 ORDER

Options Exercised to Double Last Fall's Contract for Improved Flying Fortresses

The War Department has placed an \$8,000,000 contract with the Boeing Aircraft Company of Seattle for an additional quantity of four-engined Flying Fortresses, improved models of the original B-17 to be designated B-17D.

The new order consists of the exercise of a purchase option which the War Department has held in connection with a similar \$8,000,000 order placed last fall for Boeing B-17C ships. The two orders combined total about 80 planes.

Production of the first quantity has reached a rate of one every four working days. The additional planes will follow last fall's order through the production lines.

Lockheed Gets More Commercial Business

New commercial business amounting to more than \$1,000,000 has been announced by Lockheed Aircraft Corp., Burbank, Cal., as listed below. Majority of new business consists of repeat orders from airlines for the 14-passenger Lodestar:

Three Lodestars for Air France. Air France ordered three of this same type in February.

Two Lodestars for Regie Air Afrique. This line also has placed previous orders for the Lodestar.

Three Lodestars for Continental Airlines (AMERICAN AVIATION, Apr. 15).

One executive model Lodestar for an unnamed purchaser, and a six-passenger personnel transport for the U. S. Navy.

More than 35 Lodestars have been ordered to date.

Lockheed's backlog of unfilled orders is currently in excess of \$55,000,000. Of this amount, nearly 20% is represented by orders for commercial planes.

Opposition Expected for C-W-Atlas Merger Plan

Plans for merger of Curtiss-Wright Corp. and Atlas Corp. announced recently and reported in AMERICAN AVIATION, Apr. 1 are expected to be opposed by Massachusetts Investors Trust and Supervised Shares Inc., investment trusts, at the forthcoming meeting of C-W stockholders when formal approval of the plan will be sought. Nine reasons for the opposition were cited by the investment trusts in a letter to Curtiss-Wright's board of directors. Massachusetts Investors Trust holds 21,700 shares and Supervised Shares holds 4,000 of C-W class A stock, it was said.

Floyd B. Odum, Atlas president, in a letter sent recently to Atlas stockholders, said a meeting to act upon the merger will not be held for several weeks during which time details of the proposed plan will be completed.

Menasco Engineering 770-HP. Engine; Largest Project of Kind on West Coast

Menasco Manufacturing Co., Los Angeles, is engineering a 770-hp. V-12 inline engine for production in mid-1941, it has been learned. Eventually three of four of these engines, largest ever projected on the west coast, may be linked under the firm's unitwin patents to form a single 1400-hp. engine. Heretofore aircraft engine production on the west coast has been confined to smaller horsepower classes.

With a backlog of \$150,000, 270 employees and 43,000 sq. ft. of floor space available, the firm is anticipating a bright future. The backlog is small because Menasco is in an interim

Maintenance Experts Hear Wright Lectures

Over 100 maintenance experts of the CAA, airlines, military services and aircraft manufacturers studied the latest methods of servicing Wright aircraft engines at the five-day session which Wright Aeronautical Corp., inaugurated April 8 in its Paterson, N. J., plant. It was the fourth of a



Arthur Nutt is shown pointing to a design feature of Wright aircraft engines. Reading left to right, the group includes G. W. Lossow and Oliver A. Rost, senior CAA inspectors at Chicago and Seattle, and Clinton W. Cook, Sacramento (Cal.) Army Air Depot.

series of semi-annual sessions conducted by Wright.

Arthur Nutt, vice-president-engineering for the Wright company, and president of SAE, William D. Kennedy, service manager for Wright, and Edward G. Mason, service instruction supervisor, were among officials who lectured on maintenance subjects. Lectures were illustrated by the showing of stereopticon slides and by group tours through the Wright factory and to Caldwell-Wright airport.

Douglas Employment Over 16,000; Payroll \$490,000

Total employment of the two plants of Douglas Aircraft Co. has passed 16,000, the company announced Apr. 10. This is one-fourth of all employees in the nation's aircraft manufacturing industry. Payroll on Apr. 10 reached \$490,000 weekly, an average of more than \$25,600,000 annually. Last year's payroll totaled \$10,000,000. By mid-summer the company expects to be employing 17,000. Three eight-hour shifts are now being operated at both the Santa Monica and El Segundo plants.

Receiver Requests Discharge

Lester L. Dunn, attorney of Lincoln, Neb., has requested the district court at Lincoln to approve his report as receiver for Patriot Manufacturing Co.-Arrow Aircraft & Motors Corp. and discharge him from his duties. As successor trustee for the company's bondholders, Dunn purchased the company's factory for \$30,000 at sheriff's sale, after having instituted foreclosure proceedings on June 3, 1939. He reported that 23,500 sq. ft. of floor space and 44,000 sq. ft. of lot space at the plant have been rented to the federal government for \$3,000 annually.

Grumman on Exchange

Grumman Aircraft Engineering Corp. has been granted listing on the New York Stock Exchange. Company has been registered on the Curb.

Hayes Mfg. Corp. Acquires McCauley Steel Propeller Co. of Dayton as Subsidiary

Acquisition by Hayes Manufacturing Corporation (formerly Hayes Body Corp.) of Grand Rapids, Mich., of all the outstanding capital stock of the McCauley Steel Propeller Company of Dayton, O., was announced April 12 by John W. Young, president of Hayes. Although the Hayes company will continue to build automobile bodies, the transaction definitely places Hayes in the field of airplane equipment manufacture.

The transaction includes an exclusive license from Ernest G. McCauley for Hayes to manufacture, use and sell, in this and certain foreign countries, the McCauley solid steel propeller, and the services of Mr. McCauley who is joining Hayes to aid in production and development. The McCauley propeller is used on Army Air Corps training planes including the Stearman and

Fairchild trainers. The McCauley company will be operated as a wholly owned subsidiary with plant maintained at Dayton.

Mr. Young said it is hoped that within 90 days deliveries which are now behind schedule will be caught up. He said a bottleneck exists today in the propeller field and indicated that the company will concentrate on production of propellers of seven to nine feet in diameter. "For many years a solid steel propeller has been sought because of its superior reparability, durability, smooth operation, economy and safety factors," he said. "We feel that the McCauley design has accomplished a comparable weight ratio to other metal propellers that insures an increasingly wide acceptance."

\$500,000 Allison Addition May Double Plant Output

A four-unit plant addition is under construction at Indianapolis, Ind., for Allison Engineering Div. of General Motors Corp. which is expected to double the organization's output of liquid-cooled engines from 3,500 to 7,000 units annually. Expenditure for the addition was understood to involve about \$500,000 through which 350,000 sq. ft. of floor space will be provided. Work is expected to be completed in three months.

It was reported that the Cadillac plant of General Motors has been utilized in the past for production of crank shafts which are installed in Allison aircraft engines.

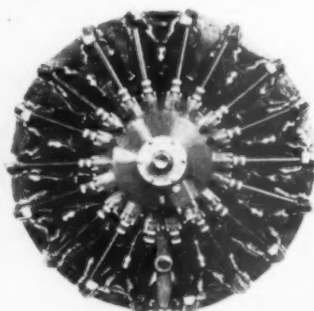
Standards Group Meets

Members of the Western Aircraft Standards Committee met recently at Lockheed Aircraft Corp.'s plant in Burbank, Cal., to cooperate in a plan to make parts and accessories interchangeable among factories. Attending the session were Henry Gledhill, Jr., Douglas Aircraft Co., Santa Monica Div., and Frank Salisbury, El Segundo Div., Jack Cox, Vega Airplane Co.; David Mendenhall, Harlow Aircraft Co.; Albert Dolan, Consolidated Aircraft Corp.; Carel Torresen, North American Aviation Inc.; Charles Newcomb, Vultec Aircraft Inc.; Glen Aron, Northrop Aircraft Inc., and Louis Cummaro and Edward J. Kasnicka of Lockheed. Boeing Aircraft Co. also has a member on the committee. Kasnicka is chairman of the group.

Middletown Airport Inc. Dissolved

New York, N. Y.—According to a report here to the SEC, Middletown Airport Inc. has been dissolved and its assets distributed prorata to stockholders.

Lycoming for Waco E



The new Waco model E may now be obtained powered by the Lycoming R-680-E series engine shown above and the Lycoming multi-position controllable propeller equipped with hollow steel blades and operated from the throttle. The R-680-E engine is a nine-cylinder radial developing 300 hp. at 2,300 rpm. It is the same basic type as the Lycoming engines used by military as well as commercial planes.

Vega Completes Move; Backlog, Payroll Up

Specialized production of engine-cowling, collector rings, entire power nacelles and many other component parts is being undertaken by Vega Airplane Co., Burbank, Cal., with completion of moving into the new plant at San Fernando Blvd. and Alameda, H. E. Ryker, general manager, said the moving was accomplished and \$100,000 in new equipment installed with no loss of production.

Employment has increased 88% to 950, and the backlog of orders has increased since Dec. 31, 1939, from \$885,000 to \$2,500,000. New property includes 23 1/2 acres of land and total plant floor area of 158,000 sq. ft. An armaments division is developing special armament for military aircraft in power turrets, fixed guns and bomb rack installations. New airplane projects are being developed in addition to the work on the Unitwin Starliner.

Wright Expands Facilities Through Purchase of Plant

Total floor space of Wright Aeronautical Corp. now stands at 1,750,000 following purchase by the Paterson, N. J., firm of the plant of Textile Dyeing and Printing Co. of America Inc. at Fairlawn, N. J., it was revealed on Apr. 12. The action was taken to handle new business, according to Myron B. Gordon, Wright's vice-president and general manager.

The textile plant has 450,000 sq. ft. of floor space and its ground comprises 46 acres. Purchase price was understood to involve approximately \$450,000. Located about four miles from Paterson, the new plant will house the connecting rod and crankshaft departments of the engine company. About 1,000 men will be transferred from Paterson.

Record Solar Backlog

Recent substantial orders from Douglas Aircraft Co. Inc., Brewster Aeronautical Corp. and the U. S. Army have given Solar Aircraft Co., San Diego, Cal., a record \$1,250,000 backlog, Edmund T. Price, president, has announced. Deliveries now are in excess of \$100,000 monthly, compared to a monthly average of \$62,000 last year.

Switlik Opens Plant

Switlik Parachute & Equipment Co. of Trenton, N. J., held a formal inspection of its new factory at Lalor and Hancock Sts. in Trenton on Apr. 12.

Prop Corp. Issue

Newly incorporated Di Cesare Offset Propeller Corp., 3311 W. 47th St., Chicago, Ill., has issued 2,000 shares at \$25 each and will deal in offset hubs and propellers. Officers are P. Di Cesare, O. Mattucel, L. Caracciolo, H. Mazzukelly and P. Mazzukelly.

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HARRY WOODHEAD TO AV. MFG. CORP.

Succeeds W. H. Beal as President Who Asked to Be Replaced Because of Illness

Harry Woodhead, for the last thirteen years vice-president and general manager of the Cleveland plant of the Truscon Steel Company, a subsidiary of Republic Steel Corporation, has been elected president of Aviation Manufacturing Corporation to succeed W. H. Beal, who has resigned because of ill health.

After a complete rest Mr. Beal will continue to serve the company in a consulting capacity. He has long been closely identified with Aviation Manufacturing Corp. and affiliated companies.

Mr. Woodhead will assume his duties immediately. Divisions of the organization are: Stinson Aircraft, manufacturer of military and commercial aircraft at Wayne, Mich., and Nashville, Tenn.; Lycoming division, Williamsport, Pa., manufacturers of commercial aircraft engines and propellers; and Spencer Heater, Williamsport, Pa., manufacturers of boilers and heaters.

The new president was born in Bradford, England, 51 years ago and was educated at Bradford Technical College in mechanical engineering. Prior to his coming to the United States in 1909 he worked in the Lancaster Motor Works at Birmingham, England as skilled tool and die maker and later in the engineering department. After coming to this country he was appointed in 1913 as superintendent of the Cleveland Metal Products Company in the Sarnia, Canada, plant.

From 1916 to 1920 he was works manager of the Parish and Bingham Corp., Cleveland, pressed steel fabricators, after which he was made vice-president of the Federal Pressed Steel Company, Milwaukee, Wis. Early in 1922 he was made general works manager of the A. O. Smith Company, Milwaukee, largest pressed steel products company in the world. In 1924 he became vice-president of Midland Steel Products Co., of Cleveland and Detroit. In 1928 he reorganized the Hydraulic Pressed Steel Company which became the Truscon Steel Company, Pressed Steel Division. Truscon became a subsidiary of Republic Steel Corp. in 1935 with Mr. Woodhead continuing as vice-president and general manager.

Mr. Woodhead is not entirely new to aviation, for he has visited many of the important aircraft factories of the United States at various times in connection with his duties as vice-president and general manager of various companies with which he has been associated.

Four Executives Leave Vought-Sikorsky Division

Four executives of Vought-Sikorsky Aircraft Div. of United Aircraft Corp. at Stratford, Conn., have left the employ of the company, it was revealed recently.

The four men are Louis Conrad, production engineer; Fred F. Bettinger, factory superintendent; Frank Coriell, planning supervisor, and Ernest J. Wenimann, assembly foreman. John F. Emmert has been promoted to factory superintendent, succeeding Bettinger, it was reported.

New De Haviland Director

W. J. McDonough has been appointed director of operations for De Haviland Aircraft Co. of Canada Ltd., Toronto, Philip C. Garratt, managing director, has announced.

Spartan Trainer Ready



Now ready for production is a new primary trainer, model NS-1, produced by Spartan Aircraft Co., Tulsa, Okla., and flight tested by both the Army and Navy.

The NS-1 is a two-place biplane with wing spread of 33 ft., 8 3/4 in.; height, 9 ft., 4 1/4 in.; length, 24 ft., 7 3/4 in.; weight empty, 2,080 lbs.; useful load, 720 lbs.; gross weight, 2,800 lbs. Ship is powered by a Lycoming R-680-7 engine rated at 220 hp.

Fuselage is welded steel, fabric covered aft of the rear cockpit; wing construction consists of laminated spruce

spars, spruce ribs and drag struts, fabric covered; interplane and cabane struts are of streamlined steel tubing, and ailerons are of riveted aluminum alloy construction with fabric covering. Fin and stabilizer are of stressed skin alloy construction, and the elevator and rudder of riveted dural frame work, fabric covered.

A single tab controllable from the cockpit provides horizontal trim. Landing gear of the split axle type and the swiveling tail wheel unit are both equipped with oleo shock absorbers.

FISCHBECK PROMOTED

P & W's Chief Metallurgist Is Now Process Engineer

Henry J. Fischbeck, chief metallurgist for Pratt & Whitney Aircraft Div. during the last ten years, has been promoted to the position of process engineer, it was announced on April 11 by the division of United Aircraft Corp. at East Hartford, Conn.



Fischbeck

A specialist in the field of metallurgy for 25 years, Fischbeck has also had wide experience in the applications of metallurgy to aircraft. His first experience along this line was in 1916 with Simplex Automobile Co. which at that time was manufacturing Hispano-Suiza aircraft engines. In 1929 he joined Pratt & Whitney to organize the metallurgical and heat-treating department.

BENDIX MEETING

H. B. Baker Replaces the Late Victor W. Klierath on Board

At the annual meeting of Bendix Aviation Corp., held early in April at South Bend, Ind., the following were elected directors: Vincent Bendix, A. C. Anderson, H. B. Baker, E. R. Breach, Paul H. Davis, S. G. Down, Charles Marcus, W. L. McGrath, C. O. Miniger, E. R. Palmer and D. O. Thomas. Former board was re-elected with the exception of Baker who was elected to fill the vacancy caused by the death of Victor W. Klierath.

Following officers were elected: Vincent Bendix, president; Charles Marcus, vice-president—aviation operations; D. O. Thomas, vice-president—automotive operations; E. R. Palmer, vice-president and treasurer; W. L. McGrath, vice-president; H. A. Gossner, secretary; W. H. Houghton, controller.

Stockholders approved a plan for the issuance of not to exceed 65,000 shares of stock of the corporation to executives and more important employees. Stock is to be issued on purchase options for investment only, one-third of the amount to be under option each year over a period of three years, at an option price of \$30 per share.

Douglas 8A-4 Tested

The first of 15 new 8A-4 attack-bombers ordered by the Kingdom of Iraq has been completed and test flown. It was announced recently by officials of Douglas Aircraft Co. The ship was built in the company's El Segundo, Cal., plant. Deliveries are scheduled for completion this spring.

CHIEF TEST PILOT

Reed, Formerly With Douglas, Appointed by Boeing

Appointment of Albert C. Reed to the position of chief test pilot of Boeing Aircraft Co., Seattle, was announced recently by Edmund T. Allen, Boeing director of flight and research. Reed joined Allen's department in July 1939 as test pilot and head of the flight test unit. Previously he had been with Douglas Aircraft Co. Inc. for three and one-half years as test pilot and flight engineer. He served as test pilot on DC-4 tests and was in charge of the flight planning and testing technique.



Reed

Warren Becomes Director of Spencer-Larsen Corp.

Minton M. Warren, president of Aeronautical Securities Inc., has been elected a director of Spencer-Larsen Aircraft Corp., according to an announcement on Apr. 18 from Gilbert Colgate, chairman of the latter company.

In 1925 Warren organized Aero Supply Manufacturing Co. and later became a vice-president of Curtiss-Wright Corp. and manager of its St. Louis plant. Subsequently, he was made secretary-treasurer of C.-W., a position he held until 1931.

Howard Board Elects Parker; Firm's Cargo Plane Near Completion

Evan J. Parker, formerly associated with General Motors Corp. and treasurer of Howard Aircraft Corp. since January, has been elected president of the Chicago aircraft firm to succeed Ben O. Howard, founder of the company who has resigned as a director and is no longer associated with the organization. Parker will continue to hold the office of treasurer, it was understood.

Howard, it is believed, will attempt to set up a new factory in the Los Angeles area for the production of a high performance plane.

Dr. Robert E. Nebesar and B. D. De Weese will remain as head of the engineering department and director of foreign and domestic sales, respectively, the company announcement said. Gordon Israel, former chief engineer for Howard and recently of the staff of Stinson Aircraft Div. of Aviation Manufacturing Corp., has rejoined the Chicago group.

The company is ready to seek orders on a large cargo carrier plane. It was explained, now that engineering work on the craft has advanced to the stage of completion. A model for the lighter plane field also is being projected by the engineering department. Manufacture of gliders for another enterprise will begin soon, it was said.

At present, deliveries are being made at the rate of about one unit per week. In addition, the company is seeking sub-contract work from large military aircraft manufacturers whose facilities are insufficient.

Open Patent Dept.

Air Associates, Inc., Roosevelt Field, Garden City, L. I., has opened a separate patent department to handle patent applications, licensing agreements and other patent work. Howard T. Jeandron, registered patent attorney and graduate of Washington College of Law, will head the department. He was formerly on the patent staffs of the Western Electric Company and W. L. Maxson Corporation.

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